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DEPARTMENT OF THE ARMY
DEPARTMENT OF THE NAVY
DEPARTMENT OF THE AIR FORCE
MARINE CORPS

FM 30-30
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NavMC 2522

June 1962

AIRCRAFT RECOGNITION MANUAL



ISSUED BY DIRECTION OF
CHIEF OF BUREAU OF NAVAL WEAPONS



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DEPARTMENTS OF THE ARMY, THE NAVY AND THE AIR FORCE,

WASHINGTON 25, D.C., 15 June 1962

FM 30-30/NAVWEPS 00-80T-75/AFM 50-40/NAVMC 2522, Aircraft Recognition Manual, is published for the information and guidance of all concerned.

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For explanation of abbreviations used, see AR 320-50.

AIR FORCE:

"F."

MARINE CORPS:

4000 (less 4033), 6600, 7000 (ABP, A03c), 7370 (less 7373, 7380) (1), 1025, 3710, 3740, 3760, 6025, 6905, 6908 (2), 6912, 7315, 7373, 7380 (2), 4033 (25), 7233 (50).

This manual supersedes and replaces FM 30-30/NAVAER 00-80T-75/AFM 50-40 NAVMC 2522 of June 1959.

CONTENT AND ARRANGEMENT

This Aircraft Recognition Manual covers aircraft of the United States and foreign countries. It contains all available unclassified aircraft recognition information. New types of aircraft, design changes in present aircraft, and discarding of old aircraft will necessitate revisions. Therefore, from time to time supplements will be published and distributed for insertion in the manual.

The following is a complete in-line assembly arrangement of the publication. It is important that the standard continuity be maintained at all times in order that revisions and supplements may be entered without delay or confusion. Material is grouped by section index tabs, and pagination is not employed in the body of the manual.

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Following is a list of all the aircraft covered in this manual. Three types of coverage are used: full-page coverage, partial-page coverage, and photograph coverage only. Aircraft which receive full-page coverage are preceded in the list by an asterisk (*), those with partial-page coverage are preceded by a double asterisk (**), and those aircraft which have photograph coverage only have nothing preceding them. The tab pages facilitate the locating of a particular aircraft once it has been determined in which section the aircraft is contained. Those aircraft that receive full-page coverage are located after the tab pages marked Major Aircraft. Aircraft with partial-page coverage or photograph coverage only are placed after the tab pages marked Other Aircraft. In the Other Aircraft sections, aircraft with photograph coverage only follow those with partial-page coverage.

U.S. NAVY

*AD	*FJ-2, 3	HUS (See HSS)
*AD-5	*FJ-4	JD
*A3D (USAF B-66)	*F8U	**OE (See U.S. Army L-19)
*A4D	GV-1 (USAF C-130)	**P4M
*A2F	HOK	*P5M
*AJ	HO4S	*P2V
*A3J	HRS	*P3V
*F3D	HR2S	**R4D-8 (USAF C-47)
*F4D	HSS	**R5D (See USAF C-54)
*F9F	HSS2	**R6D (See USAF C-118)
F9F-8P	HTL-5	**R4Q (See USAF C-119)
F9F-8T	HTL-7	**R7V (See USAF C-121C)
*F11F	HUK	**R4Y (See USAF C-131)
*F2H	HU2K	SNB (See USAF C-45)
*F3H	HUL	*S2F
*F4H	HUP	T-28

T-34	T2V	**UF (USAF SA-16A)	**WV-2
TF	TV2 (See USAF T-33)	**W2F	
T2J	**UC-1 (See U.S. Army U-1A)	WF2	

U.S. AIR FORCE

*B-47	**C-124	*F-105	RF-84F
*B-52	**C-130	*F-106	**SA-16 (USN UF-1)
*B-57	**C-131 (USN R4Y)	H-13	T-28
*B-58	**C-133	H-19	T-29
*B-66 (USN A3D)	C-140	H-21	T-33
C-45 (USN SNB)	*F-84F	H-43A	T-34
**C-47 (USN R4D-8)	*F-86	H-43B	**T-38
**C-54 (USN R5D)	*F-89	**KB-50	**T-39
C-97 (See KC-97)	F-94C	*KC-97	TB-25
**C-118 (USN R6D)	*F-100	*KC-135	U-2
**C-119 (USN R4Q)	*F-101	**L-20 (See	U-3A
**C-121	*F-102	U.S. Army L-20)	X-15
**C-123	*F-104		

U.S. ARMY

*AC-1	H-21	HC-1B	**L-20A
*AO-1	H-23	**HU-1A	**L-23D
H-13H	H-34	**L-19A	U-1A
H-19	H-37		

U.S. COMMERCIAL AIRCRAFT

Boeing 707	Douglas DC-7	Grumman Gulfstream
Boeing 720	Douglas DC-8	Lockheed Electra
Convair 880	Fairchild F27 Friendship	Vickers Viscount

UNITED KINGDOM

**Argosy	**Freighter	**Provost	**Valetta/Varsity
Auster	*Gannet	SC. 1	*Valiant
**Avro 748	*Gnat	*Scimitar	**Vampire Trainer
Belvedere	**Hastings	*Sea Hawk	**Vanguard
**Beverley	Herald	**Sea Prince	V.C. 10
**Britannia	Heron	*Sea Venom	*Victor
Britannic	*Hunter	*Sea Vixen	**Viscount
*Buccaneer	*Javelin	*Shackleton	*Vulcan
*Canberra	**Jet Provost	Skeeter	Wasp
**Comet	*Lightning	*Swift	**Wayfarer
**Devon	*Meteor	Sycamore	Wessex
Dragonfly	Pembroke	Trident (D.H. 121)	Westminster
FD-2	Pioneer	Twin Pioneer	Whirlwind

U.S.S.R.

Backfin	**Cleat	**Fang	Hen
*Badger	**Coach	Fargo	Hog
**Bat	**Coke	*Farmer	**Hook
*Beagle	**Colt	Feather	**Horse
*Bear	**Cooker	**Fishbed	**Hound
**Beast	**Cookpot	**Fishpot	*Madge
*Bison	**Coot	*Fitter	Mark
Blowlamp	Cork	*Flashlight A	Mascot
*Bosun	**Crate	*Flashlight B & C	**Max
**Bull	Creek	**Flora	Midget
**Camel	**Cub	*Fresco	Moose
**Camp	*Faceplate	**Hare	Mop
Cart	*Fagot	Hat	Mule
**Cat			

CANADA

*Argus	*CF-100	**CL-44	North Star
**Beaver	**Chipmunk	**CL-66	**Otter
**Caribou (U.S. Army AC-1)	**CL-41	CS2F-1 (USN S2F)	

FRANCE

*Alizé	Djinn	**Mirage IV	S.E. 161 Languedoc
Alouette II	*Etendard IV	Mistral	S.O. 30P Bretagne
Alouette III	F4U-7	*Mystère	S.O. 95 Corse II
Aquilon	**Flamant	**Noratlas	**Spirale
Avro York	Frelon	**Nord 3202	**Super Broussard
Brequet 765 Saharé	Griffon II	**Nord 3400	*Super Mystère
**Brequet 941 Intégral	HD-321	Ouragan	TBM Avenger
**Broussard	**Magister	**Paris	*Vautour
**Caravelle	*Mirage III	S-58	**Vultigeur

SWEDEN

J-28C (Vampire Trainer)	J-33 (Venom)	**SAAB-91	TP-46 (Dove)
*J-29	J-34	Scandia	TP-83 (Pembroke)
*J-32	*J-35		

OTHER FOREIGN AIR FORCES

Other air forces of the world and their equipment are listed alphabetically.

INTRODUCTION

Importance of Recognition

The ultimate purpose of all military training is to mold men and weapons into effective fighting units ready for combat. Readiness implies the ability to size up a situation, make a decision, and act correctly—all in a limited time. During the heat of combat, when your life and those of others are jeopardized, you will find it difficult to remain cool and collected, and there will be no time to weigh decisions. You must act instinctively. With this in mind training periods are designed to develop a man's knowledge and skill, sharpen his tactics, and improve his judgment.

Recognition training is given because visual recognition of aircraft plays a vital part in many combat situations. As long as men fly in airplanes and anti-aircraft gunners are called upon to track and fire at low-flying aircraft, someone must distinguish FRIEND from FOE, to prevent the tragic "mistakes" that are bound to occur when the fighting man is not fully trained.

There are those who believe that with supersonic aircraft one will not have the time to identify aircraft visually. Experienced pilots who have considerable time or flight experience in supersonic aircraft say that it is possible to recognize target aircraft 98 percent of the time during supersonic passes before firing range is reached. And they say with supersonic flight experience and aircraft recognition training, 100 percent recognition is possible. Speeds are a matter of relativity. The closure rate for supersonic combat cannot be high if the weapons are to be effective—50 to 100 knots in most effective types of passes before the point of break-away. So, rate of travel of modern combat aircraft doesn't mean that visual rec-

ognition is obsolete; it means it must be better than ever. Positive recognition at maximum distance, under minimum visual conditions, demands that greater effort and more practice be given during recognition training.

Then there are those who maintain that electronic identification equipment makes visual recognition unnecessary. This is something to strive for; but for the present, at least, it is only a partial answer. Radar, like all other electronic equipment, is subject to malfunctioning, damage in combat, or countering by enemy electronic jamming. In addition, it has other definite limitations, such as its inability to pick up low-flying aircraft on specific targets when many targets saturate the scope. Radar, then, can be termed a valuable support to visual recognition, but not a replacement for it. Electronic devices, if properly used and correctly operating, can seek out other aircraft, track the interceptor to within firing range, and even automatically fire the rockets or cannon, but the pilot can best determine whether the target is friend or enemy and permit or prevent its destruction.

Recognizing friend and foe is not the only function of visual recognition. It is also a source of intelligence information. This is a wartime as well as a peacetime factor that is often overlooked. A new type of aircraft spotted in a certain theater of operations may be an important clue to a new tactical situation. Incomplete and inaccurate reports of visual aircraft sightings would cause needless confusion and might result in disaster. As recently as the Suez crisis, inaccurate aircraft sighting reports created many hectic hours and considerable consternation for the staffs in Washington and the Mediterranean Theater.

Learning Recognition

The goal of recognition training is to develop experts in recognizing operational aircraft instantly under maximum range and minimum visual conditions. Personnel such as pilots, aircrewmembers, and anti-aircraft crews should necessarily be the most highly trained. However, all military personnel should have as much training as possible, both formal and informal. For not only should it be a matter of military pride to be able to identify the military aircraft of the world, but recognition skill is a kind of first aid—anyone may need to apply it at any time.

Airplanes, like automobiles and people, do differ. Trained observation can detect their underlying differences. Success in aircraft recognition depends upon complete familiarity with aircraft appearances according to the "total form" concept. This can be achieved only by continued study, augmented by a number of training devices available for this purpose. It is the aim of the Aircraft Recognition Manual to supplement the use of such training aids and to provide a convenient volume of reference.

Airplanes must be studied in detail in order to gain familiarity with the distinguishing features of their particular shapes, but two pitfalls should be avoided:

1. Minor details, no matter how distinctive, should not be emphasized as they are unlikely to be visible at critical ranges.

2. In analyzing an airplane part by part, care must be taken not to lose sight

of the plane's overall configuration, or "total form." Each element should be examined, not as a recognition feature in itself, but as an integral part of the plane's general design.

Although the substance of an airplane is only the summation of its parts, its appearance evolves not only from the characteristics of its components but also from the way such components are visually related to each other. It will be found much less difficult to remember the appearance of an airplane as a unit than to try to keep separately in mind the characteristics of all its major parts. Learning the airplane this way is not only easier but much more effective when the time comes for putting the knowledge to work.

Recognition skill endures only with practice. No one is ever permanently checked out to the extent that he need no longer study. Constant review sparked by an aroused interest and enthusiasm is essential as long as the recognition requirement exists.

With this in mind the members of the U.S. Armed Forces can improve their acquaintance with the military aircraft of the United States and the aircraft produced and flown by other nations of the world. In addition, commercial aircraft which are seen on all airways will be of military interest to the armed services, for it is a certainty that any commercial aircraft which can be used as military transports and liaison or observation planes will be so utilized by the enemy if the need should ever arise.

UNIFORM CLASSIFICATION OF AIRCRAFT

Uniform Classification for Use in Combining USAF, Navy, and Foreign Aircraft

Airplanes

1. Bomber

- a. Heavy or Heavy Patrol
- b. Medium or Medium Patrol
- c. Light or Light Patrol
- d. Attack

2. Fighter

- a. Interceptor
- b. All-Weather
- c. Penetration

3. Reconnaissance

- a. Strategic
- b. Support-Tactical

Airplanes—Continued

4. Transport
 - a. Military
 - (1) Combat
 - (a) Heavy
 - (b) Medium
 - (c) Light
 - (2) Noncombat
 - (a) Heavy
 - (b) Medium
 - (c) Light
 - b. Nonmilitary
 - (1) Heavy
 - (2) Medium
 - (3) Light
5. Trainer
 - a. Advanced
 - b. Primary and Basic
6. Search and Rescue
7. Communications-Utility
8. Special Research

Other Aircraft

9. Target
 - a. Capable of Carrying Pilot
 - b. Not Capable of Carrying Pilot
10. Pilotless Aircraft
 - a. Capable of Carrying Pilot
 - b. Not Capable of Carrying Pilot
11. Guided Missiles
12. Glider
13. Lighter-Than-Air Craft

Information Useful in Subclassification of the Above

1. Basic Configuration
 - a. Fixed Wing
 - b. Helicopter
 - c. Autogiro
2. Number of Engines
3. Type of Propulsion
 - a. Propeller
 - (1) Reciprocating Engine (Radial and In-line)
 - (a) Pusher
 - (b) Tractor

- (2) Turboprop
 - (a) Pusher
 - (b) Tractor
 - b. Turbojet
 - c. Rocket
 - d. Ramjet
 - e. Pulsejet
 - f. Combination of Above
4. Guidance
 - a. Piloted
 - b. Remotely Controlled
 - (1) Beam Rider
 - (2) Command Guidance
 - (3) Celestial Navigation
 - (4) Homing (specify)
5. Type of Base
 - a. Land
 - (1) Skis
 - (2) Tractor
 - (3) Bicycle
 - (4) Tricycle
 - (5) Conventional-Tail Support
 - b. Ship
 - (1) Carrier
 - (2) Noncarrier (specify type)
 - c. Water
 - (1) Pontoons
 - (2) Hull
 - d. Amphibian
 - e. Parasitic
 - f. Pantobase
6. Specialized Equipment
 - a. Antisubmarine
 - b. Early-Warning
 - c. Radar-Radio Countermeasures
 - d. Control of Remotely Controlled Aircraft
7. Missiles
 - a. Air-to-Air
 - b. Air-to-Surface
 - c. Air-to-Underwater
 - d. Surface-to-Air
 - e. Surface-to-Surface
 - f. Surface-to-Underwater
 - g. Underwater-to-Air
 - h. Underwater-to-Surface

U.S. AIRCRAFT NAMES AND DESIGNATIONS

Type	Air Force	Navy and Marine Corps	Name	Manufacturer
BOMBER	Heavy-----	B-52-----	Stratofortress-----	Boeing
	Medium-----	B-47-----	Stratojet-----	Boeing
		B-58-----	Hustler-----	Convair
	Light-----	B-57-----		Martin
	Attack-----	AD-----	Skyraider-----	Douglas
		A3D-----	Destroyer/Skywarrior--	Douglas
		A4D-----	Skyhawk-----	Douglas
		A2F-----	Intruder-----	Grumman
		AJ-----	Savage-----	North American
		A3J-----	Vigilante-----	North American
	Patrol-----	P4M-----	Mercator-----	Martin
		P5M-----	Marlin-----	Martin
		P2V-----	Neptune-----	Lockheed
		P3V-----	Orion-----	Lockheed

Type	Air Force	Navy and Marine Corps	Name	Manufacturer
FIGHTER	F-84F		Thunderstreak	Republic
	F-86	FJ	Sabre/Fury	North American
	F-89		Scorpion	Northrop
	F-94C		Starfire	Lockheed
	F-100		Super Sabre	North American
	F-101		Voodoo	McDonnell
	F-102		Delta Dagger	Convair
	F-104		Starfighter	Republic
	F-105		Thunderchief	Republic
	F-106		Delta Dart	Convair
		F3D	Skynight	Douglas
		F4D	Skyray	Douglas
		F9F	Cougar	Grumman
		F11F	Tiger	Grumman
		F2H	Banshee	McDonnell
		F3H	Demon	McDonnell
		F4H	Phantom II	McDonnell
		F8U	Crusader	Chance-Vought
RECONNAIS- SANCE/ WARNING	RB-47		Stratojet	Boeing
	RB-57			Martin
	RB-66		Destroyer	Douglas
	RC-121C, D	WV-2, 3		Lockheed
	RC-130A		Hercules	Lockheed
	RF-84F		Thunderflash	Republic
	RF-101		Voodoo	McDonnell
	WB-66			Douglas
		WF-2	Tracer	Grumman
		W2F	Hawkeye	Grumman
ASW		S2F	Tracker	Grumman
TANKER		GV-1		Lockheed
	KB-50			Boeing
	KC-97		Stratofreighter	Boeing
	KC-135		Stratotanker	Boeing

Type	Air Force	Navy and Marine Corps	Name	Manufacturer
TRANSPORT/ CARGO	C-45.....	SNB.....	Expeditor/Voyager.....	Beech
	C-47.....	R4D.....	Skytrain.....	Douglas
	C-54.....	R5D.....	Skymaster.....	Douglas
	C-97.....		Stratocruiser.....	Boeing
	C-118.....	R6D.....	Liftmaster.....	Douglas
	C-119.....	R4Q.....	Flying Boxcar.....	Fairchild
	C-121.....	R7V.....	Super-Constellation.....	Lockheed
	C-123.....		Provider.....	Fairchild
	C-124.....		Globemaster II.....	Douglas
	C-130.....		Hercules.....	Lockheed
	C-131.....	R4Y.....	Samaritan.....	Convair
	C-133.....		Cargomaster.....	Douglas
	VC-137.....		Stratoliner.....	Boeing
	C-140.....		Jet Star.....	Lockheed
TRAINER		TF.....	Trader.....	Grumman
		SNB.....	Navigator.....	Beech
	T-28.....	T-28.....		North American
	T-29.....		Flying Schoolroom.....	Convair (Consolidated-Vultee)
	T-33.....	TV2.....	Shooting Star.....	Lockheed
	T-34.....	T34.....	Mentor.....	Beech
	T-37.....			Cessna
	T-38.....		Talon.....	Northrop
	T-39.....		Sabreliner.....	North American
		T2J.....	Pinto.....	North American
		T2V.....		Lockheed
	TB-25.....		Mitchell.....	North American
	TB-47.....		Stratojet.....	Boeing
	TC-121.....			Lockheed
	TF-102.....			Consolidated-Vultee
SEARCH/ RESCUE	SA 16.....	UF.....	Albatross.....	Grumman
	SB 29.....		Superfortress.....	Boeing

Type	Army	Air Force	Navy and Marine Corps	Name	Original Manufacturer
HELICOPTER	H-13	H-13	HTL 5	Sioux	Bell
			HTL 7		Bell
	H-19	H-19	H04S/HRS	Chickasaw	Sikorsky
	H-21	H-21			Piasecki
	H-23	H-23		Raven	Hiller
			HUP	Army Mule	Piasecki
	H-34		HSS/HUS	Choctaw	Sikorsky
	H-37		HR2S	Mojave	Sikorsky
		H-43A-B	HOK/HUK		Kamen
	HC-1B			Chinook	Boeing-Vertol
	HU1A			Iroquois	Bell
			HSS 2		Sikorsky
			HU2K		Kamen
			HUL		Bell
OBSERVA- TION/ UTILITY	AC-1			Caribou	
	AO-1			Mohawk	Grumman
			JD	Invader	Douglas
	L-19		OE	Birdog	Cessna
	L-20	L-20		Beaver	de Havilland
	L-23D			Seminole	Beech
	U-1A		UC-1	Otter	de Havilland

Type	Air Force	Navy and Marine Corps	Name	Manufacturer
MISCELLANEOUS-----	U-2-----	-----	-----	Lockheed
	U-3A-----	-----	-----	Cessna
	X-15-----	-----	-----	North American

DESIGNATION OF U.S. AIRCRAFT

The information on U.S. Air Force Aircraft contained in this section is taken from AFR 65-60 and Technical Order 1-1-81. Supplemental data on U.S. Navy Aircraft can be found in BUAER Instruction 05030.4 (CONFIDENTIAL).

Designation of Naval Aircraft

Model designations for experimental, evaluation, and production naval aircraft are composed of one each of the following elements (1 through 8) in the order listed, as applicable, unless otherwise noted.

1. **PREFIX LETTER.** Prefix letters are as follows:

- X Experimental Models
- Y Evaluation (Test) Models

No prefix letter is used for production models.

2. **TYPE LETTER.** Type letters are as follows:

- V Heavier-Than-Air (Fixed Wing)
(Omitted from designation)
- H Heavier-Than-Air (Rotary Wing)
- Z Lighter-Than-Air
- D Remotely Controlled Tactical Airborne Vehicle

3. **CLASS (BASIC MISSION) LETTER.** Class (basic mission) letters are as follows:

<i>Class Letter</i>	<i>Basic Mission</i>
A	Attack
F	Fighter
G	In-Flight Refueling Tanker
O	Observation
P	Patrol
R	Transport
S	Antisubmarine
T	Training
U	Utility
W	Airborne Early Warning

4. **DESIGN NUMBER.** The design number indicates the sequence number of the

designer's aircraft of the same class, except that for the first design, the numeral "1" is omitted.

5. **DESIGNER'S CODE LETTER.** Designer's code letters are assigned only to companies designing the aircraft. Aircraft manufactured by companies other than the original designer carry the code letter of the original designer, but a different modification dash number is used. Designer's code letters have been established as follows:

<i>Code Letter</i>	<i>Designer</i>
A	Ryan Aeronautical Co.
B	Beech Aircraft Corp.
C	The deHavilland Aircraft of Canada Ltd.
D	Douglas Aircraft Co., Inc.
E	Cessna Aircraft Co.
E	Hiller Helicopters
F	Grumman Aircraft Engineering Corp.
G	Goodyear Aircraft Corp.
H	McDonnell Aircraft Corp.
J	North American Aviation, Inc.
K	Kaman Aircraft Corp.
L	Bell Aircraft Corp.
M	The Martin Co.
N	Gyrodyne Company of America, Inc.
P	Vertol Aircraft Corp. (Formerly Piasecki Helicopter Corp.)
Q	Fairchild Engine and Airplane Corp. (Fairchild Aircraft Div.)
S	Sikorsky Aircraft Div. of United Aircraft Corp.
T	Temco Aircraft Corp.
U	Chance Vought Aircraft, Inc.
V	Lockheed Aircraft Corp.
Y	Convair Division (A Division of General Dynamics Corp.)

6. **MODIFICATION DASH NUMBER.** The modification dash number indicates modifications to the original design. The "-1" indicates the original design, and succeeding dash numbers indicate the first modification, second modification, etc.

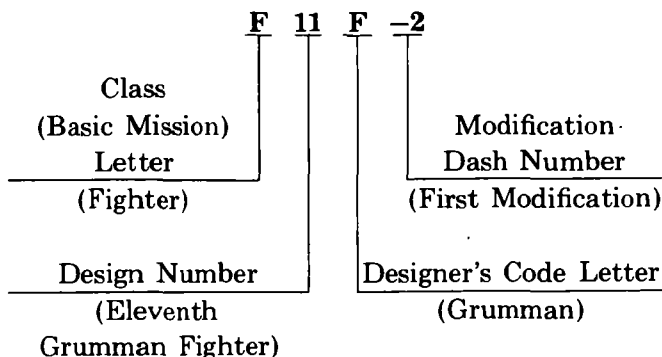
7. SUFFIX LETTER. A suffix letter is used to denote that an aircraft is modified for a special mission or configuration. A second suffix letter may be used when it is necessary to establish a variation of the suffix version. Suffix letters are assigned only from the list below and for the special mission or configuration listed. The suffix letter indicates that the modifications are of a permanent nature and limit or augment the basic mission or configuration accordingly. If no suffix letter is appropriate, it may be substituted for by a dash in the event that a suffix number is indicated.

<i>Suffix Letter</i>	<i>Special Mission or Configuration</i>
A	Amphibious
B	Special Armament Installation
C	Carrier Operation (of Noncarrier Aircraft)
D	Drone Control (Controlling Aircraft)
E	Special Electronics Installation
F	Special Power Plant Installation
G	Coast Guard Configuration
J	Special Weather
K	Target Drone (Controlled Aircraft)
KD	Combination Target Drone and Control Aircraft
L	Winterized
M	Guided Missiles Carrier
N	All Weather
N(A)	All Weather Version Stripped for Day Attack
P	Photographic
Q	Countermeasures
R	Transport
S	Antisubmarine
T	Training
U	Utility
W	Airborne Early Warning
Z	Administrative Version

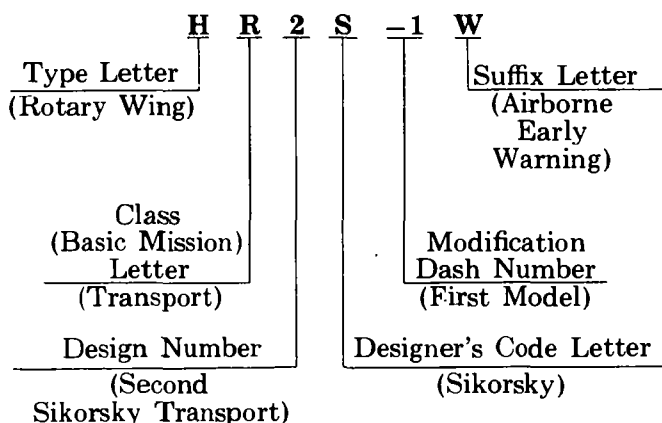
8. SUFFIX NUMBER. A suffix number may be added after the suffix letter when an aircraft configuration is modernized with different equipment without changing its special mission. The numeral "1" indicates the first configuration, and succeeding numerals indicate second, third configuration, etc.

9. EXAMPLES OF AIRCRAFT MODEL DESIGNATIONS. The following examples illustrate the use of the elements described above in establishing aircraft model designations.

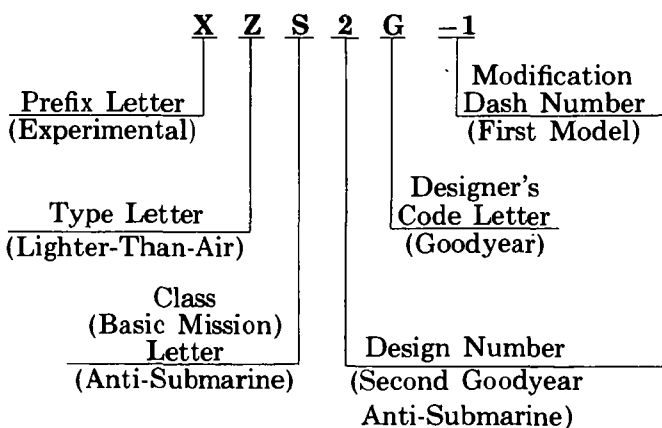
a. Typical Example of a Fixed Wing Aircraft, F11F-2.



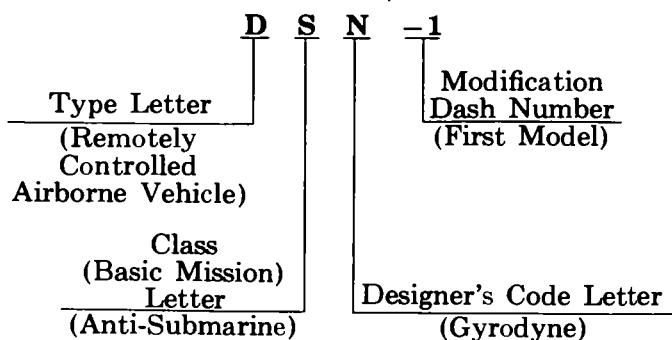
b. Typical Example of a Rotary Wing Aircraft, HR2S-1W.



c. Typical Example of a Lighter-Than-Air Aircraft, XZS2G-1.



d. Typical Example of a Remotely Controlled Airborne Vehicle, DSN-1.



Designation of Research Aircraft

Airplanes designed and constructed for research purposes are designated by the designer's code letter followed by his design project number, for example: "D-652" would designate a naval research aircraft designed by Douglas and would be the 652nd. design project by Douglas.

Guided Missile Model Designations

Model designations for experimental, evaluation, training, and production guided missiles are composed of the following elements (1 through 6) in the order listed, as applicable.

1. PREFIX LETTERS. One or more prefix letters are used as follows:

- R Denotes a missile used for obtaining basic engineering information, or for testing components or techniques applicable to guided missiles.
- X Denotes experimental models
- Y Denotes operational evaluation models
- T Denotes operational training models

No prefix letter is used for production tactical models.

2. CLASS. (BASIC MISSION) LETTERS. One of the following two letter combinations is used to indicate basic mission for which designed:

Class Letter	Basic Mission
AA	Air-to-Air
AS	Air-to-Surface
AU	Air-to-Underwater
SS	Surface-to-Surface
SA	Surface-to-Air
SU	Surface-to-Underwater

3. TYPE LETTER. Guided missiles are

of one type and are designated by the letter "M."

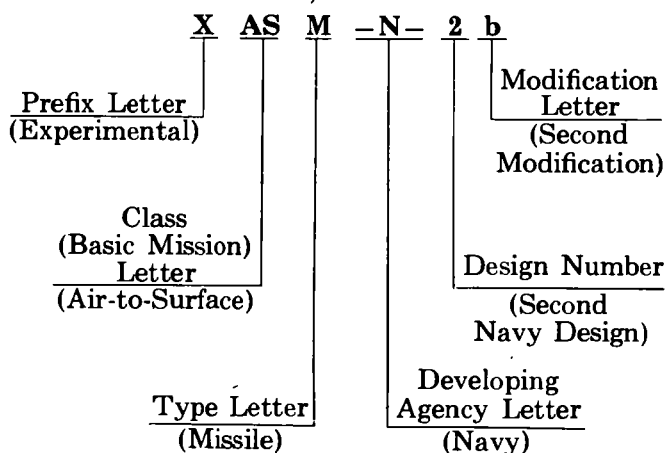
4. SERVICE OR DEVELOPING AGENCY LETTER. The letter "N" after the type letter indicates the missile has been developed by the U.S. Navy. A dash is inserted before and after the Service letter.

5. DESIGN NUMBER. A number following the Service letter indicates the Navy design number in consecutive order within the class of missiles.

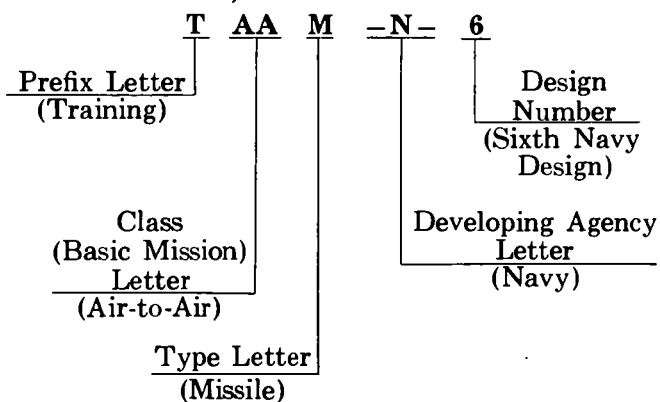
6. MODIFICATION LETTER OR LETTERS. A lower-case letter beginning with "a" and continuing alphabetically indicates successive design modifications; "a" indicates first modification; "b" indicates second modification, etc.

7. EXAMPLES OF GUIDED MISSILE MODEL DESIGNATIONS. The following examples illustrate the use of the elements described above in establishing guided missile model designations.

a. Typical Example of an Air-to-Surface Guided Missile, XASM-N-2b

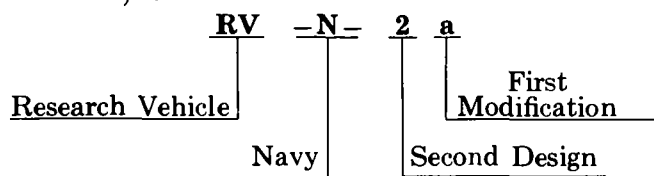


b. Typical Example of an Air-to-Air Guided Missile, TAAM-N-6



Research Vehicles

Model designations for Research Vehicles (not a part of a weapon project) shall consist of symbols indicating Research Vehicle RV, developing agency, design number within class of Navy research vehicles, and a modification letter.



KD Targets

KD targets are originally designed without provisions for a human pilot and are intended for use as targets. Model designations for KD targets are composed of one each of the following elements (1 through 5) in the order listed, as applicable.

1. **PREFIX LETTER.** Prefix letters are as follows:

- X Experimental models
- Y Evaluation (test) models

2. **TYPE LETTERS.** KD targets are of one type and are designated by the letters "KD."

3. **DESIGN NUMBER.** The design number indicates the sequence number of the designer's KD target, except that for the first design, the numeral "1" is omitted.

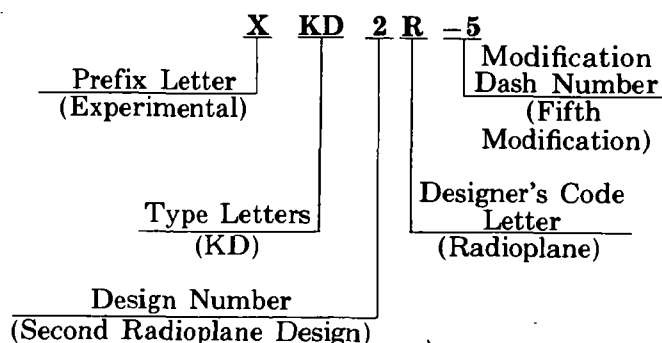
4. **DESIGNER'S CODE LETTER.** Designer's code letters are assigned only to companies designing the KD target. KD targets manufactured by companies other than the original designer carry the code letter of the original designer. However, a different modification dash number may be used. Designer's code letters have been established as follows:

Code Letter	Designer
A	Ryan Aeronautical Co.
B	Beech Aircraft Corp.
G	Globe Corp.
R	Radiplane Co.
T	Temco Aircraft Corp.
U	Chance Vought Aircraft, Inc.

5. **MODIFICATION DASH NUMBER.** The modification dash number indicates modifications to the original design. The "-1" indicates the original design, and succeeding dash numbers indicate the first modification, second modification, etc.

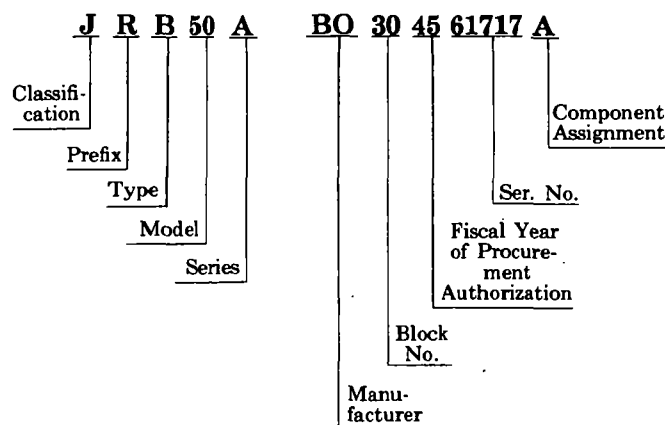
6. **EXAMPLE OF KD TARGET MODEL DESIGNATION.** The following example illustrates the use of the elements described above in establishing a KD target model designation.

a. Typical Example of a KD Target, XKD2R-5.



Designation of Air Force Aircraft

The basic components of an Air Force aircraft designation consist of the type letter, model number, series letter, and block number and may include the prefix letter and/or classification letter, if applicable. A complete designation of a typical aircraft is as follows:



1. **CLASSIFICATION LETTER.** Aircraft may have one of the following classification letters where applicable:

<i>Classification Letter</i>	<i>Title</i>	<i>Description</i>
J	Special Test, Temporary	Aircraft on special test by authorized organizations and aircraft on bailment contract, whose installed property has been temporarily removed to accommodate the test.
N	Special Test	Aircraft on special test projects by authorized activities and aircraft on bailment contract, whose configuration is drastically changed so that return of the aircraft to its original configuration is beyond practicable or economical limits.
X	Experimental	Aircraft in a developmental, experimental stage; basic type and model have been designed but not established as a standard aircraft for service use.
Y	Prototype	Aircraft procured in limited quantities to develop the potentialities of the model. Normally these aircraft will be produced on experimental tooling and will remain in test status for the life of the aircraft. (Aircraft procured for development tests and produced on production tooling will be designated by basic type and model. At such time as these aircraft are modified to a standard production configuration they will be redesignated appropriately. Example: T-37, redesignated to T-37A.)

2. **PREFIX LETTER.** The prefix is a single letter used to indicate the current usage of an aircraft when it is so modified that its original intended usage is no longer applicable or when an aircraft has an added or restrictive capability. Examples:

RB-47, KB-29. The prefix letters which are approved for current use are as follows:

<i>Prefix Letter</i>	<i>Title</i>	<i>Description</i>
A	Facility checking.	Aircraft electronic devices permit facility checking of navigational aids by Airways and Air Communications Service. Example: AC-S4D.
C	Transport	Aircraft designed primarily for the purpose of carrying cargo and/or passengers. Aircraft having a payload capacity of the basic mission greater than 2,000 pounds.
D	Director	Aircraft capable of controlling a drone aircraft or a guided missile. Example: DF-80, DB-17.
E	Early warning	Aircraft having electronic devices to permit employment as an early warning radar station. Example: EC-121C, EB-29.
G	Carrier	Aircraft capable of carrying or storing within the aircraft a parasite-type aerial vehicle. Example: GB-36.
K	Tanker	Aircraft having special equipment to provide in-flight refueling of other aircraft. Example: KB-29.
M	Medical	Aircraft having equipment such as litters, galleys, heated-blanket outlets, and special oxygen outlets and which are specifically intended for transportation of medical patients.
P	Passenger	Aircraft having permanent structural provisions for the transportation of passengers and which cannot be readily modified at base level for the conversion of the aircraft to carry cargo.

<i>Prefix Letter</i>	<i>Title</i>	<i>Description</i>	<i>Type Letter</i>	<i>Title</i>	<i>Description</i>
Q	Drone	Aircraft capable of being controlled from a point outside the aircraft. Example: QB-17, QF-80.	B	Bomber	Aircraft designed primarily for the purpose of bombing enemy targets.
R	Reconnaissance	Aircraft having equipment permanently installed for photographic and/or electronic reconnaissance missions. Example: RB-47, RF-101.	C	Transport	Aircraft designed primarily for the purpose of carrying cargo and/or passengers. Aircraft having this type letter will be those having a payload capacity of the basic mission greater than 2,000 pounds.
S	Search Rescue	Aircraft having special equipment for search and rescue missions. Example: SB-29.	F	Fighter	Aircraft designed primarily for the interception and destruction of other aircraft and/or missiles. Aircraft of this type will include those of basic fighter type modified or designed to carry armaments used for destruction of enemy ground targets.
T	Training	Aircraft having training equipment installed for purposes of conducting training missions. Example: TC-54, TB-50.	H	Helicopter	A rotary-wing aircraft designed to fly in any plane—horizontal, vertical, or diagonal.
V	Staff	Aircraft having accommodations such as chairs, tables, lounge, berths, etc., for the transportation of staff personnel. Example: VC-121, VC-131.	K	Tanker	Aircraft designed primarily to provide in-flight refueling of other aircraft.
W	Weather	Aircraft having meteorological equipment permanently installed. Example: WB-29, WB-50. Aircraft used for weather reconnaissance without inclusion of permanently installed meteorological equipment will not be designated by the prefix "W."	L	Liaison	Aircraft designed primarily for the purpose of carrying small loads for relatively short distances. This type letter will be used to indicate those aircraft used for artillery spotting and other liaison missions.
			R	Reconnaissance	Aircraft designed primarily for reconnaissance purposes, utilizing separately or in combination photographic, electronic, infrared, and/or other detection devices.
			T	Training	Aircraft designed primarily for the purpose of training personnel in the operation of aircraft and/or related equipment, and having provisions for instructor personnel.

Aircraft currently bearing prefix letters, "B," "F," "L," and "Z," will remain so designated until modified to return them to their basic type or removed from the active inventory. This provision also applies to the "A" prefix on C-47 and C-54 aircraft.

3. TYPE LETTER. A type letter is used to indicate basic-mission grouping of the aircraft, as bombers, fighters, transports, etc. A type letter will be assigned when a new aircraft is designed. The type letters approved for current use are as follows:

Type Letter	Title	Description
U	Utility	Aircraft designed primarily for the purpose of carrying cargo and/or passengers. Aircraft having this type letter will be those having a payload of the basic mission of less than 2,000 pounds.
X	Research	Aircraft designed primarily for the purpose of testing designs of a radical nature. These aircraft are not normally intended for use as tactical aircraft.

Aircraft having type letters "A," "G," "Q," "S" will remain so designated until these aircraft are removed from the active aircraft inventory.

4. MODEL NUMBER. A model number is used to denote a general design of aircraft within a type. New model numbers will be assigned to aircraft when an existing model is redesigned to an extent that it no longer reflects the general configuration of the original model. Examples of changes requiring model redesignations are as follows:

a. Changing the quantity of engines of a specific model. (Model number changes are not mandatory if a given type and model aircraft is modified to include auxiliary power units, for example, B-36B to B-36D.)

b. Changing the wing design of a specific model from a straight-wing to a swept-wing design.

c. Changing the empennage of a specific model from straight to swept surfaces or the relocation of the empennage.

Model changes will be assigned the next consecutive number above the last assigned model number in a type.

5. SERIES LETTER. Series letters are used to denote major changes in the aircraft structure or in equipment which result in significant changes to the aircraft

operation and/or logistics support. Typical examples requiring series designation changes of a given type and model aircraft are:

a. A change is made in the engine which materially affects the performance rating or precludes or affects interchangeability of engines in an aircraft. (Specific examples:—Change from reciprocating to turboprop engine—C-121A, R3350-75 to YC-121F, T-34-P-6 or change in engine model—B-47B, J47-GE-23 to B-47E, J47-GE-25.)

b. A change is made in propellers which precludes or affects interchangeability (Curtiss instead of Hamilton Standard) or flying characteristics of an aircraft (13ft-6in. propeller instead of a 12ft-6in. propeller).

c. A major change in primary installed armament. (Addition or relocation of turrets, addition or deletion of guns, installation of 20-mm guns in place of .50 caliber guns, etc.)

Series changes will be assigned the next consecutive alphabetic designation above the last assigned series letter of a specific type and model. To avoid confusion, the letters "I" and "O" will not be used as series letters.

6. MANUFACTURER'S CODE. The letters denoting the prime contractor of an aircraft are placed following the series letters (or the model number, if a series letter is not applicable). Two letters are used to represent the prime contractor of the aircraft. Following is a list of the manufacturers' codes.

Code	Manufacturer	Address
AD	Aero Design & Engineering Co.	Bethany, Okla.
AE	Aeronca Aircraft Corp.	Middletown, Ohio
AH	American Helicopter Co., Inc.	Manhattan Beach, Calif.
BA	Bell Aircraft Corp.	Atlanta, Ga.
BE	Bell Aircraft Corp.	Buffalo, N.Y.
BF	Bell Aircraft Corp.	Fort Worth, Tex.
BH	Beech Aircraft Corp.	Wichita, Kans.

<i>Code</i>	<i>Manufacturer</i>	<i>Address</i>
BN	Boeing Airplane Co.	Renton, Wash.
BO	Boeing Airplane Co.	Seattle, Wash.
BW	Boeing Airplane Co.	Wichita, Kans.
CA	Chase Aircraft Co., Inc.	West Trenton, N.J.
CC	Canadian Commerical Corp.	Toronto, Canada
CE	Cessna Aircraft Co.	Wichita, Kans.
CF	Convair (Consolidated-Vultee Aircraft Corp.)	Fort Worth, Tex.
CN	Chase Aircraft Company, Inc.	Willow Run, Mich.
CO	Convair (Consolidated-Vultee Aircraft Corp.)	San Diego, Calif.
CS	Curtis-Wright Corp.	St. Louis, Mo.
CU	Curtis-Wright Corp.	Buffalo, N.Y.
DC	Douglas Aircraft Co.	Chicago, Ill.
DH	DeHavilland Aircraft	Toronto, Canada
DK	Douglas Aircraft Co.	Oklahoma City, Okla.
DL	Douglas Aircraft Co.	Long Beach, Calif.
DM	Doman Helicopter, Inc.	Danbury, Conn.
DO	Douglas Aircraft Co.	Santa Monica, Calif.
DT	Douglas Aircraft Co.	Tulsa, Okla.
FA	Fairchild Aircraft Division	Hagerstown, Md.
FL	Fleetwings, Inc.	Bristol, Pa.
FO	Ford Motor Co.	Willow Run, Mich.
FT	Fletcher Aviation Corp.	Pasadena, Calif.
GA	G & A Aircraft Co.	Willow Grove, Pa.
GK	General Motors	Kansas City, Kans.
GR	Grumman Aircraft Corp.	Bethpage, Long Island, N.Y.
HE	Helio Aircraft Corp.	Norwood, Mass.
HU	Hughes Aircraft Co.	Culver City, Calif.
KA	Kaman Helicopter Corp.	Windsor Locks, Conn.
KE	Kellet Autogyro Corp.	Philadelphia, Pa.
KM	Kaiser Manufacturing Corp.	Willow Run, Mich.
LK	Laister-Kauffman Aircraft Co.	St. Louis, Mo.
LM	Lockheed Aircraft Corp.	Marietta, Ga.
LO	Lockheed Aircraft Corp.	Burbank, Calif.
MA	Martin Co., The Glenn L.	Baltimore, Md.
MC	McDonnell Aircraft Corp.	St. Louis, Mo.
MH	McCulloch Motors Corp.	Los Angeles, Calif.

<i>Code</i>	<i>Manufacturer</i>	<i>Address</i>
MO	Martin Co., The Glenn L.	Omaha, Nebr.
NA	North American Aviation, Inc.	Inglewood, Calif.
NC	North American Aviation, Inc.	Kansas City, Kans.
ND	Noordyn Aviation Co., Limited	Montreal, Canada
NF	North American Aviation, Inc.	Fresno, Calif.
NH	North American Aviation, Inc.	Columbus, Ohio
NK	Nash-Kelvinator Corp.	Detroit, Mich.
NO	Northrop Aircraft, Inc.	Hawthorne, Calif.
NT	North American Aviation Inc.	Dallas, Tex.
NW	Northwestern Aeronautical Corp.	St. Paul, Minn.
PH	Piasecki Helicopter Corp.	Morton, Pa.
PI	Piper Aircraft Corp.	Lockhaven, Pa.
PL	Platt-LePage Aircraft Co.	Eddystone, Pa.
RE	Republic Aviation Corp.	Farmingdale, Long Island, N.Y.
RP	The Radioplane Co.	Van Nuys, Calif.
RY	Ryan Aeronautical Co.	San Diego, Calif.
SA	Stroukoff Aircraft Corp.	West Trenton, N.J.
SE	Seibel Helicopter Co.	Wichita, Kans.
SI	Sikorsky Aircraft Division	Stratford, Conn.
TG	Texas Engineering & Manufacturing Co.	Greenville, Tex.
TP	Texas Engineering & Manufacturing Co.	Grand Prairie, Tex.
UH	United Helicopter Corp.	Palto Alto, Calif.
VE	Vega Aircraft Corp.	Burbank, Calif.
VI	Canadian Vickers, Limited	Montreal, Quebec, Canada
VL	Vertol Aircraft Corp.	Morton, Pa.
VU	Vultee Aircraft Corp.	Downey, Calif.
VW	Vultee Aircraft Corp.	Wayne, Mich.
WC	Waco Aircraft Co.	Troy, Ohio

7. BLOCK NUMBER. The production block number is used to show normal production changes affecting the aircraft design and/or installed equipment. The block numbering system consists of the assignment of production blocks, starting at 05 and progressing in multiples of five.

Intermediate block numbers will be reserved for assignment of AMC as considered necessary. As many changes as possible will be accumulated for release in a production block to insure that as many aircraft as possible will be of a standard configuration.

8. YEAR OF PROCUREMENT. This designation is assigned to an aircraft upon manufacture and will consist of the last two digits of the fiscal year in which the procurement for that specific aircraft was authorized. This number will be applied to each aircraft immediately preceding the serial number.

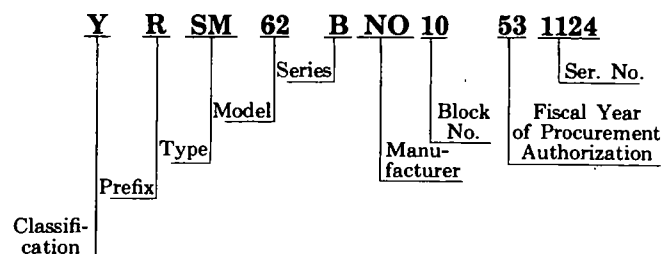
9. SERIAL NUMBER. The serial number of an aircraft represents the sequential number from a block of numbers assigned to a specific type and model of aircraft when the contract for that aircraft is let. Sequence of numbers is maintained with reference to the total procurement of aircraft and guided missiles authorized from a specific fiscal year. Aircraft of a specific type and model procured from the same or a subsequent fiscal year under another contract are assigned numbers applicable to the fiscal year from which the new contract was authorized.

10. COMPONENT ASSIGNMENT LETTER. This letter is placed on each aircraft to denote the component to which it is assigned. The authorized component assignment letters are as follows:

U.S. Air Force.....	A
U.S. Army.....	G
Air Reserve.....	R
ROTC	T
Air National Guard.....	N

Guided Missile Designation

The basic components of a missile designation, as those of aircraft, consist of a type letter, model number, series letter, block number and may include prefix and/or classification letters if applicable. A complete designation of a typical guided missile is as follows:



1. CLASSIFICATION LETTER. The classification letter indicates missiles being used for experimentation or service test. The classification letters authorized for use are:

Classification Letter	Title	Definition
X	Experimental	Missile in a developmental, experimental stage with basic type and model designed, not established as a standard missile for service use.
Y	Prototype	Missiles procured in limited quantities to develop the potentialities of the model. Normally these missiles will be produced on experimental tooling and will remain in test status for the life of the missile. (Missiles procured for development tests and produced on production tooling will be designated by the basic type and model. At such time as these missiles are modified to a standard production configuration they will be redesignated appropriately.)

2. PREFIX LETTER. The prefix letter is used to indicate the current usage of a guided missile when it is modified to a configuration other than its original one, or when it has an added or restrictive capacity. Currently approved prefix letters are:

Prefix Letter	Title	Definition
I	Interceptor	A dual-capacity guided missile which can be used as an interceptor and also strategically, tactically, etc.

<i>Prefix Letter</i>	<i>Title</i>	<i>Definition</i>
R	Reconnaissance	A dual-capacity guided missile which can be used for reconnaissance or as a strategic, tactical, or interception missile, etc.

3. TYPE LETTER. Type letters are used to denote the primary intended use of a guided missile, as strategic or tactical usage, etc. They are assigned when a new missile is designed. The following type letters are approved for current usage:

<i>Type Letters</i>	<i>Title</i>	<i>Definition</i>
GAM	Guided Aircraft Missile	A type of self-propelled missile, carried by a parent aircraft, which after launching can be guided to ground targets.
GAR	Guided Aircraft Rocket	A type of self-propelled aircraft armament, normally carried by a fighter-type aircraft for attack on airborne targets, and which after launching can be guided to the target.
IM	Interceptor Missile	A surface-to-air guided missile employed in the Air Force air defense mission.
Q	Target Drone	A guided missile used in the Air Force target mission.
RM	Reconnaissance Missile	A tactical, strategic or interceptor missile employed in the reconnaissance role.
SM	Strategic Missile	A guided missile employed in the Air Force strategic mission.
TM	Tactical Missile	A guided missile employed in the Air Force tactical mission.
X	Research	A guided missile primarily designed for the purpose of testing designs of a radical nature. These missiles are not normally intended for use as functional missiles.

4. MODEL NUMBER.—Model numbers are used to denote a general design of guided missiles within a type. New model numbers will be assigned to a missile when an existing model is redesigned to an extent that it no longer reflects general configuration of the original model. A series of model numbers will be used to designate all missiles, starting with the next higher number than assigned and proceeding to a consecutively higher number for each new model. (Examples: TM-61, SM-62, GAM-63, SM-65, GAM-67, etc.)

Guided Aircraft Rockets (GAR) will have a separate model numbering system starting with the number "1" for the first Guided Aircraft Rocket and proceeding to the next higher number for each new GAR model. Examples: GAR-1, GAR-2, GAR-3, etc.

5. SERIES LETTER. A series letter is used to denote a major change in a missile that makes it operationally or logistically different to others of the same type and model. Series changes will be assigned the next alphabetic designation above the last series letter of a specific type and model missile. To avoid confusion, the letters "I" and "O" will not be used.

6. MANUFACTURER'S CODE. The letters denoting the prime contractor of a missile will be placed following the series letters (or the model number if a series letter is not applicable). Two letters are used to represent the prime contractor of the missile. The manufacturers' codes for guided missiles are identical with those used for aircraft.

7. BLOCK NUMBER. The production block number is used to show normal production changes affecting the missile design or installed equipment. The block numbering system will consist of the assignment of production blocks starting with 05 and progress in multiples of five. Intermediate block numbers will be reserved for assignment of AMC as considered necessary.

8. YEAR OF PROCUREMENT. This designation is assigned to a missile upon manufacture and consists of the last two digits of the fiscal year in which the procurement for that specific missile was authorized. This number is applied to each missile immediately preceding the serial number.

9. SERIAL NUMBER. The serial number of a missile will represent the sequential number from a block of numbers assigned to a specific type and model of

missile when the contract for that missile is let. Sequence of numbers will be maintained with reference to the total procurement of aircraft and guided missiles authorized from a specific fiscal year. Missiles of a specific type and model procured from the same or a subsequent fiscal year under another contract will be assigned numbers applicable to the fiscal year from which the new contract was authorized.

FOREIGN AIRCRAFT MANUFACTURERS

ARGENTINA

I. Ae..... Military Aircraft Factory, Instituto Aerotecnico.
 Petrolini..... Petrolini Hermanos, Societ  Anonima Industrial y Commercial.

BELGIUM

Avions Fairey..... Avions Fairey S.A.
 SABCA..... Soci t  Anonyme Belge de Constructions Aeronautiques.

BRAZIL

C.N.N.A..... Companhia Nacional de Navega  o A rea.
 I.P.T..... Instituto de Pesquisas Technologicas. (Technical Research.)

CZECHOSLOVAKIA

Aircraft factories in Czechoslovakia, the only country in the Soviet bloc possessing a real aircraft industry, are mostly automobile firms which are characterized by their geographical location (Oakovice Works, Chosen Works, Ostrokovice Works, Karlin Works, etc.).

Czechoslovakian aircraft types have retained their traditional family names, which are reminiscent of their capitalist predecessors: Aero—Mraz, Avia—Praga, Letov—Zlin.

FRANCE

Adam.....  tablissements A ronautiques R. Adam.
 Arsenal..... Arsenal de l'A ronautique.
 B arn..... Constructions A ronautiques du B arn.
 Boisavia..... Avions Boisavia.
 Breguet..... Soci t  Anonyme des Avions Louis Breguet.
 Brochet..... Avions Maurice Brochet.
 C.F.A..... Compagnie Fran aise d'Aviation.
 Dassault..... Avions Marcel Dassault.
 Fouga.....  tablissements Fouga et Cie.
 Hurel-Dubois..... Avions J.D.M.
 J.D.M..... Avions J.D.M.
 Jodel..... Soci t  des Avions Jodel.
 Lat co re..... Soci t  Industrielle d'Aviation Lat co re.
 Leduc..... Ren  Leduc Fils.
 M.D.G..... Instruments de Pr cision M.D.G.
 Max Holste..... Avions Max Holste.

FRANCE (Cont.)

Millet-Lagarde.....	Société Millet-Lagarde.
Morane-Saulnier.....	Aeroplanes Morane-Saulnier.
Nord.....	Société Nationale des Constructions Aéronautiques du Nord (S.N.C.A.N.).
Rey.....	Société des Avions François Rey
S.C.A.N.....	Société des Constructions Aéro Navales de Port-Neuf.
S.E.C.A.N.....	Société des Etudes et des Constructions Aéro-Navales.
Sevimia.....	Victor Minié Aéronautique.
S.I.P.A.....	Société Industrielle pour l'Aéronautique.
Starck.....	Avions André Starck.
Sud-Est.....	Société Nationale des Constructions Aéronautiques de Sud-Est (S.N.C.A.S.E.)
Sud-Ouest.....	Société Nationale des Constructions Aéronautiques de Sud-Ouest (S.N.C.A.S.O.).

ITALY

Aerauto.....	Aerauto S. S., Costruzioni Aeronautiche e Meccaniche.
Augusta.....	Costruzioni Aeronautiche Giovanni Augusta.
Alaparma.....	Società Aeroplani Livio Agostini.
Ambrosini.....	Società Aeronautica Italiana, Ing. A. Ambrosini & C.
Breda.....	Società Italiana Ernesto Breda.
C.V.V.....	Istituto di Aeronautica, Politecnico di Milano.
Fiat.....	Società Per Azioni Fiat.
G.C.A.....	Gruppo Costruzioni Aeronautiche.
Macchi.....	Aeronautica Macchi S. A.
Nardi.....	Nardi S. A. Per Costruzioni Aeronautiche.
Piaggio.....	Piaggio & C., Società Per Azioni.
S.A.C.A.....	Società Per Azioni Costruzioni Aeronavali.
Saiman.....	Società Anonima Industrie Meccaniche Aeronautiche Navali.
Siai-Marchetti.....	Società Per Azioni Siai-Marchetti.
Vibert.....	Ali Viberti S.P.A.

GREAT BRITAIN

Airspeed.....	Airspeed Division of the de Havilland Aircraft Co., Ltd.
Armstrong Whitworth.....	Sir W. G. Armstrong Whitworth Aircraft, Ltd.
Auster.....	Auster Aircraft, Ltd.
Avro.....	A. V. Roe & Co., Ltd.
Blackburn & General.....	Blackburn & General Aircraft, Ltd.
Boulton Paul.....	Boulton Paul Aircraft, Ltd.
Bristol.....	The Bristol Aeroplane Co., Ltd.
Chilton.....	Chilton Aircraft Co., Ltd.
Chrislea.....	Chrislea Aircraft Co., Ltd.
de Havilland.....	The de Havilland Aircraft Co., Ltd.
English Electric.....	The English Electric Co., Ltd.
Fairey.....	The Fairey Aviation Co., Ltd.
Folland.....	Folland Aircraft, Ltd.
Gloster.....	The Gloster Aircraft Co., Ltd.
Handley Page.....	Handley Page, Ltd.
Hawker.....	Hawker Aircraft, Ltd.
Hawker Siddeley.....	Hawker Siddeley Group, Ltd.
Heston.....	The Heston Aircraft Co., Ltd.
Martin-Baker.....	Martin-Baker Aircraft Co., Ltd.
Percival.....	Percival Aircraft, Ltd.
Saro.....	Saunders-Roe, Ltd.

GREAT BRITAIN (Cont.)

Scottish Aviation.....	Scottish Aviation, Ltd.
Short.....	Short Bros. & Harland, Ltd.
Slingsby.....	Slingsby Sailplanes, Ltd.
Supermarine.....	Supermarine Aviation Works, Div. Vickers-Armstrong, Lt.
Vickers.....	Vickers-Armstrong, Ltd.
Westland.....	Westland Aircraft, Ltd.

AUSTRALIA

Commonwealth.....	Commonwealth Aircraft Corp. PTY., Ltd.
de Havilland.....	de Havilland Aircraft Proprietary, Ltd.
Fairey-Clyde.....	The Fairey-Clyde Aviation Co. Proprietary, Ltd.

CANADA

Avro.....	A. V. Roe Canada, Ltd.
Boeing.....	Boeing Aircraft of Canada, Ltd. (inactive).
C.C.F.....	Canadian Car & Foundry Co., Ltd. (acquired Noorduyn).
Canadair.....	Canadair Ltd.
Cancargo.....	Cancargo Aircraft Manufacturing Co., Ltd.
de Havilland.....	The de Havilland Aircraft of Canada, Ltd.
Found.....	Found Brothers Aviation Co.
National Research Council.....	Division of Mechanical Engineering.
Northwest Industries.....	Northwest Industries, Ltd.

INDIA

Hindustan.....	Hindustan Aircraft, Ltd.
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NEW ZEALAND

de Havilland.....	The de Havilland Aircraft Co., Ltd. of New Zealand.
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NETHERLANDS

Fokker.....	The N. V. Nederlandsche Vliegtuigen-Fabriek Fokker.
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NORWAY

Hönningstad.....	Norsk Flyindustri A/S.
Widerøe.....	Widerøes Flyveselskap OG Polarfly A/S.

U.S.S.R.

The State Committee for Aviation Industry has control of all aircraft design and production. (See U.S.S.R. section.)

The research development area is conducted by many establishments; the three main ones being the TsA.G.I. (Central Aero Hydronamics Institute) which is in charge of all aircraft development; the Ts.A.I.M., which does the same for aircraft engines; and the V.I.A.M., which conducts and directs research on materials.

SPAIN

C.A.S.A.....	Construcciones Aeronauticas S.A.
Hispano.....	La Hispano Aviación S.A.
I.P.....	Iberia.
Inta.....	Instituto Nacional de Tecnia Aeronautica.

SWEDEN

Kungl. Flygforvalt- nigens Flygverkstad.....	Royal Air Board Aircraft Factory.
SAAB.....	Svenska Aeroplan A.B.
Skandinaviska Aero A.B.....	Scandinavian Airways, Ltd.

SWITZERLAND

Fabrique Fédérale des Avions..... Federal Aircraft Factory.
Flug & Fahrzeugwerke..... Flug & Fahrzeugwerke A.G.
Pilatus..... Pilatus Flugzeugwerke A.G.

TURKEY

Nuri Demirag..... Nuri Demirag Tayyare Fabrikasi.
T.H.K..... Turk Hava Kurumu Ucak Fabrikasi.

DESIGNATION OF SERVICE AIRCRAFT ENGINES

Reciprocating Engines

The Air Force and Navy systems for the designation of aircraft engines are similar. All service engines are designated by a letter indicating their basic type. The prefix letters X and Y may be used to signify experimental and service test of restricted service engines, respectively.

<i>Letter Symbols:</i>	<i>Types</i>
R.....	Radial
V.....	Upright Vee
L.....	In-Line
O.....	Opposed

This is followed by the displacement of the engine in cubic inches to the nearest multiple of 5 and, finally, the Service model: R-1830-65, V-1710-8, R-1820-56, R-2600-8. The final model number of engines ordered to an Air Force specification is always an odd number. Engines ordered by the Navy always carry even model numbers. However, under this system it is possible for a Navy airplane to be equipped with an engine originally contracted for by the Air Force with an Air Force Number. Such an engine will retain the Air Force designation. The last part of the designation may consist of a suffix letter together with the basic model number, indicating major design changes which do not affect performance, installation, or interchangeability of the complete engine in the airplane. When the engine is equipped

with water injection, the letter W is placed between the model number and the suffix letter. A hypothetical example would be the V-1710-20WB: tenth Navy model, water injection, second major revision of the model.

Turbine and Jet Engines

The first part of the designation shall consist of a letter (or letters) together with a number indicating the type of engine.

<i>Letter symbols:</i>	<i>Types</i>
J.....	Turbojet (Gas Turbine Engine without External Propeller)
T.....	Turboprop (Gas Turbine Engine with External Propeller)
PJ.....	Pulsejet
RJ.....	Ramjet

The type numerals used in connection with the type letters will be assigned progressively by the Services and shall begin with the number 30 for the Navy and the number 31 for the Air Force. The type numerals are arbitrary and do not represent any characteristics of the units involved. Even numbers will be assigned by the Bureau of Aeronautics to types approved by the Navy, and odd numbers will be assigned by the Air Materiel Command to types approved by the Air Force. The second part of the designation will consist of dash letter(s) symbol indicating the manufacturer, as follows:

<i>Manufacturer's Name</i>	<i>Letter Symbol</i>
Aerojet Engineering Corp-----	AJ
Allison Div., General Motors Corp-----	A
Continental Aviation and Engineering Corp-----	T
Fredric Flader Co-----	FF
General Electric Co-----	GE
Globe Aircraft Corp-----	GA
G. M. Giannini & Co-----	GN
Marquardt Aircraft Co-----	MA
McDonnell Aircraft Corp-----	MD
Northrop Hendy Co-----	NH
Pratt & Whitney Aircraft Div., United Aircraft Corp-----	P
Radio Plane Co-----	RP
Ranger Aircraft Engine Div., Fairchild Engineering & Airplane Corp-----	R
Solar Aircraft Co-----	S
Westinghouse Electric Corp-----	WE
Wright Aeronautical Corp., Div. Curtiss-Wright Corp-----	W

The third part of the designation will consist of a dash numeral, the model number. These model numbers will be assigned to jet engines as they are now applied to reciprocating aircraft engines, that is, odd numbers for Air Force models and even numbers for Navy models. Air Force model numbers for each type of jet engine will begin with one and will continue with consecutive odd numbers. Navy model numbers for each type of jet engine will begin with two and will continue with consecutive even numbers. All even model numbers will be assigned by the Bureau of Aeronautics, including those applied to Air Force approved engine types. All odd numbers will be assigned by the Air Materiel Command, including those applied to Navy approved engine types.

A given engine design will have only one type and model designation for both Services. For example, should the Navy desire to use an engine bearing Air Force type and model numbers, the Navy will use those numbers without change for all designation purposes. Further, should

the Air Force desire to use a Navy approved type of engine but require minor production changes, the Air Force shall use the Navy type designation and assign its own model designation, which will begin with one and will continue with consecutive odd numbers, regardless of the Navy model number.

The letters X and Y may be used at the discretion of the Services for the purpose of signifying experimental and service test of restricted service engines, respectively. When used, such letters shall precede the designation arrangement described above.

The following hypothetical examples illustrate the arrangement and significance of the subject designations:

J30-A-2	J—Turbojet type 30—First Navy type A—Manufactured by Allison 2—First Navy model
J31-W-1	First Air Force Model of First Air Force Turbojet Type. (Made by Wright Aeronautical.)
J31-GE-1	First Air Force Model of First Air Force Turbojet Type. (Wright Engine made by General Electric.)
J35-GE-2	First Navy Model of Third Air Force Turbojet Type. (Made by General Electric.)
J35-GE-3B	Second Air Force Model of Third Air Force Turbojet Type. (Made by General Electric.) (Second major revision of the model.)
T34-P-3	Second Air Force Model of Third Navy Turboprop Type. (Made by Pratt & Whitney.)
RJ35-T-6	Third Navy Model of Third Air Force Ramjet Type. (Made by Continental Motors.)
PJ36-RP-7	Fourth Air Force Model of Fourth Navy Pulsejet Type. (Made by Radio Plane.)
XJ34-GA-2	First Navy Model of Third Navy Turbojet Type. (Experimental Status.) (Made by Globe Aircraft.)
YRJ37-LA-2	First Navy Model of Fourth Air Force Ramjet Type. (Restricted Service Status.) (Made by Lockheed Aircraft.)

INTERNATIONAL AIRCRAFT REGISTRATION SYMBOLS

All nations but the United States follow a registration system adopted at Versailles in 1919, whereby the nationality and registration marks of civil aircraft of countries which are members of the International Commission for Air Navigation (C.I.N.A.) consist of groups of five letters. Each nation is assigned a one- or two-letter national symbol, and four letters with a single-letter symbol (G-ABXY, CF-BEL). The United States uses the letter N as the national symbol followed by a registration number (N-13365). This practice supersedes the old identification marking system which employed the letter N followed by another letter which was C for standard, L for limited, R for restricted, or X for experimental. The second letter was in turn followed by a registration number.

However, under the new requirements the regulation states that aircraft having other than a STANDARD airworthiness certificate shall display in print the appropriate airworthiness classification at each passenger or cockpit entrance in a position so as to be readily visible to passengers or crew entering the aircraft; i.e., LIMITED, RESTRICTED or EXPERIMENTAL.

Letter symbols and licenses appear on both sides of the fuselage, and across both panels of upper and lower wing surfaces. The United States is an exception, applying the license only to both sides of the rudder and to the upper right and lower left wing surfaces. Russia uses URSS or its Russian equivalent, CCCP, followed by a number on fuselage and on both right and left wing panels.

INTERNATIONAL CIVIL AIRCRAFT MARKINGS

Afghanistan.....	YA	Hong Kong.....	VR-H
Albania.....	ZA	Islands under the rule of the	
Argentina.....	LV, LQ	Western Pacific High Com-	
Australia.....	VH	mission.....	VP-P
Austria.....	OE	Jamaica.....	VP-J
		Kenya.....	VP-K
Belgium.....	OO	Leeward Islands.....	VP-L
Belgian Congo.....	OO	Malaya.....	VR-R
Bolivia.....	CP, CB	Malta.....	VP-M
Brazil.....	PP, PT	N. Rhodesia.....	VP-R
British Colonies and Protectorates:		Nyasaland.....	VP-N
Aden.....	VR-A	Sarawak.....	VR-W
Barbados.....	VQ-B	Seychelle Islands.....	VQ-S
Bermuda.....	VR-B	Sierra Leone.....	VR-L
British Guiana.....	VP-G	Singapore.....	VR-S
British Honduras.....	VP-H	S. Rhodesia.....	VP-Y
British North Borneo.....	VR-O	St. Helena.....	VQ-H
British Somaliland.....	VP-S	St. Lucia.....	VQ-L
Brunei.....	VR-U	St. Vincent.....	VP-V
Cyprus.....	VQ-C	Tanganyika.....	VR-T
Fiji Islands.....	VQ-F	Trinidad and Tobago.....	VP-T
Gambia.....	VP-X	Uganda.....	VP-U
Gibraltar.....	VR-G	Zanzibar.....	VP-Z
Granada.....	VQ-G	Bulgaria.....	LZ

Burma.....	XY-XZ	Libya.....	5A
		Luxemburg.....	LX
Cambodia.....	K		
Canada.....	CF	Mexico.....	XA, XB, XC
Ceylon.....	4R	Monaco, Principality of.....	CZ
Chile.....	CC	Monte Carlo.....	MC
China (Nationalist).....	B	Morocco.....	CN
Colombia.....	HK		
Costa Rica.....	T1	Netherlands.....	PH
Cuba.....	CU	Netherlands, Antilles.....	PJ
Curacao (Netherlands West Indies).....	PJ	Netherlands, New Guinea.....	JZ
Czechoslovakia.....	OK	Netherlands, Surinam.....	PZ
		New Hebrides Condominium.....	YJ
Denmark.....	OY	New Zealand.....	ZK, ZL, ZM
Dominican Republic.....	H1	Newfoundland.....	VO
		Nicaragua.....	AN
Ecuador.....	HC	Norway.....	LN
Egypt.....	SU		
Eire (Ireland).....	E1, EJ	Pakistan.....	AP
El Salvador.....	YS	Panama.....	HP
Ethiopia.....	ET	Paraguay.....	ZP
		Peru.....	OB
Finland.....	OH	Phillipine Republic.....	P1
France, Colonies and Protectorates, less Morocco.....	F	Poland.....	SP
		Portugal.....	CS
Germany, Federal Republic of.....	D	Portuguese Colonies.....	CR
Ghana.....	9G	Rumania.....	YR
Greece.....	SX	Russia.....	URSS, CCCP
Guatemala.....	TG		
		Saudi Arabia.....	HZ
Haiti.....	HH	Soviet Union.....	URSS, CCCP
Honduras.....	XH	Spain.....	EC
Hungary.....	HA	Sudan.....	SN
		Surinam (Netherlands Guiana).....	PZ
Iceland.....	TF	Sweden.....	SE
India.....	VT	Switzerland.....	HB
Indonesia.....	PK	Syria.....	YK
Iran (Persia).....	EP		
Iraq.....	Y1	Thailand (Siam).....	HS
Ireland.....	E1, EJ	Turkey.....	TC
Israel.....	4X		
Italy.....	I	Union of South Africa.....	ZS, ZT, ZU
		United Kingdom.....	G
Japan.....	JA	United States of America.....	N
Jordan.....	JY	Uruguay.....	CY
		U.S.S.R.....	URSS, CCCP
Korea, Republic of.....	HL		
		Venezuela.....	YV
Laos.....	F-LA	Vietnam.....	XY
Lebanon.....	OD		
Liberia.....	FL	Yemen.....	YE
		Yugoslavia.....	YU

GLOSSARY

The purpose of inserting a glossary into the manual is to enable all who use it to describe an airplane by the same terms. By no means does it pretend to be an encyclopedia of aeronautical and aerodynamical science, but rather a reference page to define those visible features of any airplane by which it is most readily recognized.

Aerodyne (heavier-than-air aircraft)—Airplane, landplane, seaplane, amphibian, gyroplane, autogyro, helicopter, glider, ornithopter, kite.

Aerostat (lighter-than-air aircraft)—Airship, balloon.

Aileron—A control surface set into or near the trailing edge of an airplane wing, extending, when in the wing, toward the tip and usually within the contour of the wing, used to control the rolling movements of the airplane.

Ailevator—See "Elevon."

Airfoil—Any surface, such as an aircraft wing, propeller blade, aileron, or rudder, designed to obtain a reaction, as lift or thrust, from the air through which it moves.

Airplane—A mechanically driven fixed-wing or adjustable fixed-wing aircraft, heavier than air, which is supported by a dynamic reaction of the air over its wing surfaces.

Air Scoop—A scoop or opening designed to induct air into the aircraft or its engine for some purpose such as carburetion, cooling, or ventilating.

Airship—An aerostat provided with a propelling system and with means of controlling the direction of motion. The term "airship" is sometimes incorrectly applied to heavier-than-air craft (airplanes) and should be avoided when used in that sense.

Amphibian—An aircraft designed to take off from and land on either land or water.

Anhedral—A positive dihedral. Sometimes used erroneously for negative dihedral.

Area Rule Concept—A concept of aircraft design based on the notion that interference drag at transonic speed depends almost entirely on the distribution of the aircraft's total cross-sectional area along the direction of flight.

Arrester Hook—A retractable hook lowered by a carrier-based aircraft in order to make limited-space landings by engaging wires on the deck.

Arresting Gear—Any gear incorporated in aircraft and in the landing area to facilitate landing in a limited space, especially on the deck of an aircraft carrier.

Autogyro—A type of aircraft propelled forward by a conventional engine and propeller but supported in the air by a rotor which is aerodynamically rotated by the forward motion of the plane.

Belly—Colloquial term for the ventral portion or underside of the fuselage.

Biplane—An aircraft with two wings placed one above the other.

Blister—A bulge or blister-like protuberance on an airplane, usually dome-shaped and often transparent, from which a person may observe or operate a flexible gun.

Bomber—(a) **Heavy**—Any large bomber considered to be relatively heavy, such as, in 1955, a bomber having a gross weight, including bomb load, of 250,000 pounds or more, as in the case of the B-36 and the B-52.

(b) **Medium**—Any bomber considered to be intermediate in weight (between the light and heavy bombers).

(c) **Light**—Any bomber considered to be relatively light in weight, such as a bomber having a gross weight of less than 100,000 pounds.

The words "medium," "light," and "heavy," when used to modify bombers, have connotations of range and altitude, as well as of weight. In the past, no serious inconsistencies have arisen from these connotations, but the future may introduce some. Clarity requires that the words "medium," "light," and "heavy" be used in such contexts as terms of weight only.

(d) **Attack**—Bombardment airplane which specializes in the direct support of ground or naval forces.

(e) **Patrol**—A bomber especially suited to patrol duty, which strikes at targets of opportunity in the area being patrolled.

Cabin—An enclosed compartment in an aircraft for cargo, passengers, or crew members.

Canopy—A transparent hood, covering, or enclosure.

Bubble Canopy—A cockpit canopy molded in one piece and having no external bracing or divisions.

Cathedral—A negative dihedral.

Center Section—The central panel of a wing.

Chord—The straight-line distance between the leading and trailing edges of an airfoil; the width of an airfoil.

Cockpit—The compartment in an aircraft to accommodate the pilot and/or other persons, usually open or covered by a movable canopy.

Control Surface—A movable airfoil, such as aileron, elevator or rudder, which controls the movement of the aircraft.

Cowling—A removable covering, as around an engine.

Cranked Wing—An inverted gull wing.

Dihedral—The upward or downward inclination of an airplane's wing or other supporting surface with respect to the horizontal. If the inclination is upward, the dihedral is positive; if downward, negative. In some contexts, dihedral refers to an upward inclination only.

Dive Brake—A flap or movable surface which, when extended, reduces the speed of the aircraft in a dive.

Dorsal—Adjective pertaining to the back or top portion of the fuselage.

Drag Chute—A deceleration parachute.

Droop Wings—A term applied to wings that have cathedral or negative dihedral. The B-47 and the F-104 both have droop.

Edge—See "Leading Edge" and "Trailing Edge."

Elevator—A movable airfoil usually attached to the stabilizer, which controls the movement of the aircraft about the lateral axis (climb and dive).

Elevon—An airplane control surface combining the functions of an elevator and aileron.

Empennage—The rear part of an airplane, usually consisting of a group of stabilizing planes (horizontal stabilizers and vertical fin) to which are attached the control surfaces. Also called the "tail assembly."

Engine—The motive power of an aircraft.

Conventional reciprocating engines produce forward motion by driving propellers or rotors and are divided into two basic types, radial and in line, depending on the arrangement of the cylinders about the crankshaft. The former type is usually air cooled, while the latter type may be either liquid cooled or air cooled.

Reaction engines produce forward motion by the discharge of heated gases through a nozzle and are divided into two basic types, jet and rocket. The former type utilizes the surrounding atmosphere to provide the thrust medium and the oxygen for its fuel combustion, while the latter type functions independently of the surrounding atmosphere, the thrust being provided by the combustion of self-contained oxygen and fuel.

Aircraft may be powered by either a reciprocating or a reaction engine or a combination of both. The word motor should not be applied to an aircraft engine, since it usually refers to one of the many small auxiliary motors in an aircraft which are used to operate pumps, flaps, landing gear, etc.

Experimental Aircraft—An aircraft built to test an idea, or to try for certain capabilities or characteristics. Often designated by the symbol X.

Fairing—An auxiliary part of the exterior structure, the function of which is to reduce drag, or "stream-line" the aircraft.

Fighter—a. **Interceptor**—Fighter airplane of relatively short range and with a high rate of climb, designed primarily to engage in combat with enemy aircraft during daylight hours and under relatively favorable weather conditions, in order to prevent their reaching the target.

b. **All Weather**—Fighter airplane especially equipped with the electronic and other devices necessary to permit combat operation at night or under adverse weather conditions.

c. **Penetrator**—Fighter airplane of long range, designed primarily to penetrate deep into enemy territory against air or ground targets.

Fillet—A faired surface or piece that smooths the flow of air at an internal angle, as at a wing root.

Fin—A fixed or adjustable airfoil to afford directional stability, such as a tail fin or skid fin. Common name for the vertical stabilizer.

First-Line Aircraft—Aircraft with characteristics and performance which make them suitable to perform critical and essential missions.

Flap Cowl—A movable section of the cowling used to control the flow of air around the engine or cowlings units.

Flap, Wing—A movable section of an airfoil used to change the effect of air flow over the airfoil. Wing flaps are located along the trailing edge of the wing and are lowered during takeoff and landing in order to increase the effective lift of the wing.

Flaperon—A kind of control surface used both as a flap and as an aileron.

Float—A completely enclosed watertight structure attached to an aircraft to give it buoyancy and stability in water.

Flying Boat—A form of seaplane whose main body or hull provides flotation.

Flying Tail—A horizontal stabilizer, the angle of attack of which is adjustable from the cockpit for longitudinal trim.

Fuselage—The main body of an aircraft, to which the wings and tail unit are attached.

Glider—An aircraft heavier than air, with wings but without a power plant. It is supported in the air essentially by forward motion produced by gliding.

Primary-Type Glider—A glider marked more for its rugged characteristics than for its aerodynamic performance.

Secondary-Type or Utility Glider—A glider designed to have better aerodynamic performance

than the primary type, but rugged enough for the use of pilots with limited training.

Performance-Type Glider—A glider, generally called "sailplane," having a high degree of aerodynamic refinement and low minimum sinking speed, often used in soaring contests.

Cargo-Troop Gliders—Large gliders designed to carry cargo and/or troops and towed by a powered aircraft to within gliding range of the destination.

Greenhouse—Colloquial term for the transparent hood or canopy over the cockpit or the bombardier compartment.

Guided Missile—The field of guided missiles is considered to include uninhabited missiles the trajectory of which is influenced by a mechanism within the missile, or by radio command outside the missile, together with components of such missiles and associated systems. Conventional torpedoes are excluded.

Height—The vertical measurement of an aircraft at rest, taken from the lowest point of contact to the topmost part of the aircraft.

Helicopter—A type of aircraft propelled through and supported in the air by rotating airfoils which are mechanically rotated by an engine about an approximately vertical axis.

Hull—The main body of a flying boat which furnishes buoyancy when in contact with the water. It contains accommodations for the crew and passengers.

In-Line—See "Engine."

Jet—See "Engine."

Landing Gear—An assembly of wheels, struts, etc., on a landplane which gives support and control to the aircraft while in contact with the ground and in take-off or landing.

Conventional-type landing gear has a tail wheel (or skid) located behind the main wheels.

Tricycle-type landing gear has a nose wheel located ahead of the main wheels.

Landplane—An aircraft designed to take off from and alight on land, especially such aircraft with wheeled landing gear.

Leading Edge—The edge of an airfoil or propeller blade which first meets or bites the air.

Length—The extreme forward-aft measurement of an aircraft.

Lighter-Than-Air Craft—Aircraft which derives its vertical lift from its weight in relation to that of an equal volume of air.

Loop-Antenna—A directional antenna consisting of one or more loops of wire or other conductor.

Mach Number—A Mach number (named for Ernst Mach of Vienna) is a means of expressing speed

in relation to the speed of sound. It is generally used to express speeds which approach or exceed the speed of sound. Mach 1.0 indicates the speed of sound—which is 661 knots (or 760.9 mph.) at sea level and 15 degrees centigrade (59 degrees Fahrenheit). A speed of Mach 0.8, for example, would be $\frac{8}{10}$ the speed of sound. Mach rhymes with lock.

Mast, Radio—A fixed spar attached to an aircraft to support the radio antenna.

Monocoque—A type of fuselage construction which relies on the strength of the skin or outer shell for its structural stiffness. The shell is supported by crosswise frames called *bulkheads* or *formers*. Semimonocoque construction is similar to monocoque except that the shell is reinforced with longitudinal stringers running perpendicular to the bulkheads.

Monoplane—An aircraft with a single plane or wing, usually divided into two parts by the fuselage. There are four general types.

a. **Low-Wing**—A monoplane with the wing located at, or near, the bottom of the fuselage.

b. **Midwing**—A monoplane with the wing located at approximately the midpoint between the bottom and the top of the fuselage.

A Low Midwing has the wing located slightly below this point, and a High Midwing has the wing located slightly above this point.

c. **High-Wing**—A monoplane with the wing located at the top of the fuselage.

d. **Parasol-Wing**—A monoplane with the wing located above the fuselage and connected to it by a cabane strut or other structure.

Nacelle—A separate streamlined enclosure on an airplane for sheltering or housing something.

Nose—The foremost part of the fuselage.

Nosewheel Dolly—A small two-wheel dolly fitted to the nosewheel strut for tail-up carrier stowage.

Obsolete Aircraft—Aircraft which are so deficient in military characteristics and performance that they can no longer be used as originally intended.

Panel, Access—A hinged or removable door which provides access to an interior compartment of the aircraft.

Instrument—A bulkhead on which the aircraft instruments are mounted.

Wing—A section of the wing which is constructed separately from the adjoining structure, such as the center panel or outer panel. On smaller aircraft the wing is often assembled in one integral panel.

Pants (also Spats)—Colloquial term for the fairing on fixed landing gear.

Pilotless Aircraft—Remotely controlled aircraft which may be capable of carrying one or more persons, but which will not carry anyone in the performance of its primary mission.

Propeller—Any device for propelling a craft through a fluid such as water or air; especially a device having blades which when rotated by a power-driven shaft produce a thrust by their action on the fluid.

Adjustable—A propeller whose blades are so attached to the hub that the pitch may be adjusted while the propeller is at rest.

Automatic—A propeller whose blades are attached to a mechanism that automatically sets them at the optimum pitch for various flight conditions.

Contrarotating—Two propellers mounted in tandem on the same shaft axis but geared to rotate in opposite directions. Sometimes called "co-axial" propellers.

Controllable—A propeller whose blades are so mounted that the pitch may be changed while the propeller is rotating.

Full-Feathering—A propeller whose blades can be turned so as to present the least resistance to the air-stream. This prevents "windmilling" of the propeller when the engine is not operating while in flight.

Pusher—A propeller mounted on the rear end of the engine or propeller shaft so as to "push" the plane forward.

Reversible-Pitch—A propeller the pitch of which can be changed during rotation to a negative angle producing a braking effect or reverse thrust.

Tractor—A propeller mounted on the forward end of the engine or propeller shaft so as to "pull" the plane forward.

Radial—See "Engine."

Reconnaissance—(a) Strategic—reconnaissance airplane of long range equipped to make flights over enemy territory for the purpose of obtaining photographic or other information useful to the planning of subsequent operations.

(b) Support—reconnaissance airplane of relatively short range designed to support land or naval operations by securing and transmitting information needed in immediate tactical decisions.

Rib—A chord-wise structural member of the wing.

Rocket—See "Engine."

Root—The "base" of the airfoil, where it is attached to the fuselage.

Rotor—A complete assembly of rotating airfoils as used on helicopters, generally revolving in an ap-

proximately horizontal plane. The airfoils are called rotor blades and are attached to the rotor hub.

Rudder—A movable airfoil usually attached to a vertical stabilizer and which controls the movement of the aircraft about the vertical axis (turn, yaw).

Sailplane—A high-performance-type glider.

Seaplane—An aircraft designed to take off from and alight on water only.

Search and Rescue (Airplane)—One equipped to specialize in the location and rescue of wrecked aircrew personnel or other persons, on land or on sea.

Second-Line Aircraft—Aircraft having formally recognized limitations for combat or other military use, used however, in emergency and when first-line aircraft are not available.

Shaft—The part connected to the power plant, which drives the propeller or rotor.

Slat—A movable auxiliary airfoil, attached to the leading edge of a wing, which when closed falls within the original contour of the wing and which when opened forms a slot.

Slot—An opening near the leading edge of a wing, either fixed or formed by a movable slat, which improves the airflow characteristics of the airfoil.

Spat—See "Pants."

Special Research (Airplane)—One designed for supersonic research or other research into aeronautical problems.

Spinner—A fairing of approximately conical or paraboloidal shape, which is fitted coaxially with the propeller hub and revolves with the propeller.

Spoiler—A movable airfoil or plate which when opened projects above the upper surface of the wing and disturbs the smooth air flow, with a consequent loss of lift and an increase in drag.

Sponson—A protuberance from a flying boat's hull, often like a stub wing, designed to increase the beam and give lateral stability in the water.

Spray Strip—A strip projecting from the hull or float of a seaplane to change the manner in which the spray is thrown.

Stabilizer—Any airfoil whose primary function is to increase the stability of the aircraft. It usually refers to the fixed horizontal tail surface of an aircraft, as distinguished from the fixed vertical surface (fin).

Step—A break in the form of the bottom of a float or hull.

Strut—A generic term for a structural member.

Cabane—A framework of struts connecting the wing to the fuselage, usually in parasol or high-wing monoplanes.

Oleo—An oil-filled shock-absorbing strut used as the main structural member of the landing gear.

Sweepback—Term applied to a wing, horizontal tail, or other airfoil whose leading edges and trailing edges are farther aft at the tips than at the roots.

Sweepforward—When the general wing shape projects forward from the fuselage.

Tab—An auxiliary airfoil set into, or attached to, a larger control surface for the purpose of reducing the control force or “trimming” the aircraft.

Tail—The after part of an aircraft, generally consisting of stabilizers, elevators, and fin and rudder.

Tail Skid—On certain airplanes, a skid attached to the underside at the rear of the fuselage serving the function of a tailwheel.

Tailwheel—A wheel for supporting the tail of an aircraft on the ground.

Taper—A gradual diminishing of the chord of thickness of an airfoil.

Target—Aircraft which may or may not be capable of carrying one or more persons, designed to be remotely controlled in flight for use in gunnery practice. (See Classification of Aircraft.)

Thrust—The resultant force in the direction of motion due to the components of the pressure forces in excess of ambient atmospheric pressure acting on all inner surfaces of the vehicle parallel to direction of motion. Thrust less drag equals accelerating force.

Thrust in relation to horsepower varies, inasmuch as the performance characteristics of a turbojet engine are such that the thrust is approximately constant, but the horsepower output increases directly with airspeed for any given altitude. Therefore, the engine ratings are usually given in pounds of thrust at standard sea-level static conditions. At 375 mph the thrust in pounds is equal to the horsepower.

Trailing Edge—The edge of an airfoil or propeller blade over which the airflow passes last.

Trainer—a. Advanced—Airplane used in training pilots in instrument flying, navigation, gunnery, or other advanced phases of military aviation.
b. Primary and Basic—Relatively light and slow airplane used in teaching students fundamentals of flying.

Transport—a. Heavy—A transport aircraft capable of carrying a relatively heavy payload. In special context, one capable of lifting a payload of approximately 25 tons.
b. Medium—A transport aircraft capable of carrying a medium-weight payload. In special context, one capable of carrying a 10-ton payload.

c. Light—A transport aircraft capable of transporting only relatively light loads.

d. Military Transport Aircraft—A transport aircraft fitted with military structural or design provisions; may be a “combat” or “noncombat” transport aircraft.

e. Combat Transport Aircraft—A military transport aircraft which is prepared and equipped with sufficient internal protection to operate at no more than reasonable risk over an active combat area.

f. Noncombat Military Transport Aircraft—A military transport aircraft which is not equipped to operate in an active combat area.

g. Nonmilitary Transport—Conventional commercial-type transport aircraft containing no provision for specialized military usage.

Turret—A movable enclosure housing armament. It may be manually operated or power driven. Remote-control turrets are controlled from a position in the aircraft some distance from the turret itself.

Undercarriage—See “Landing Gear.”

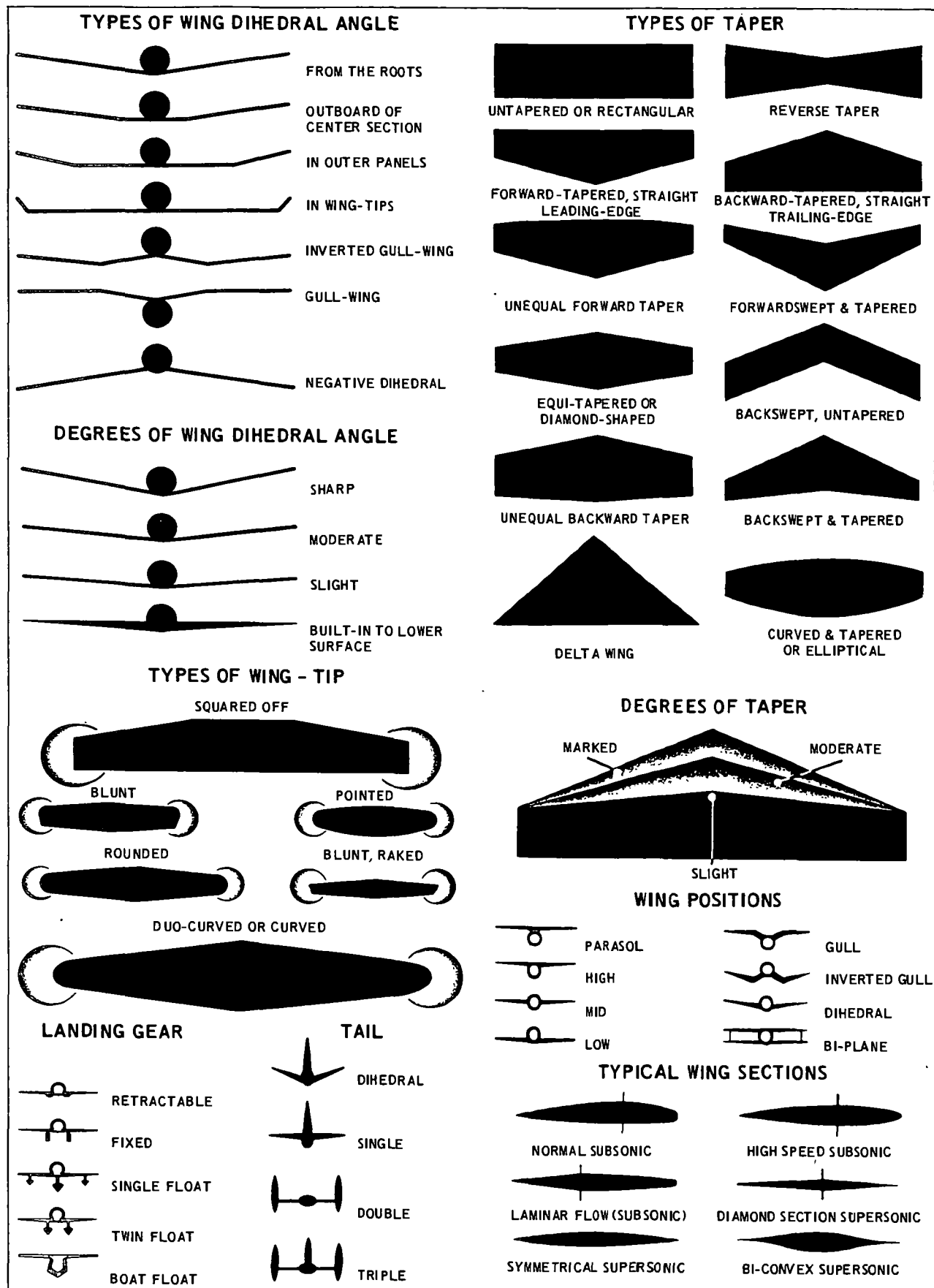
Utility—Light airplane used for carrying one or more persons or light objects relatively short distances, in liaison or in other military missions, including target aircraft control, towing of targets, etc.

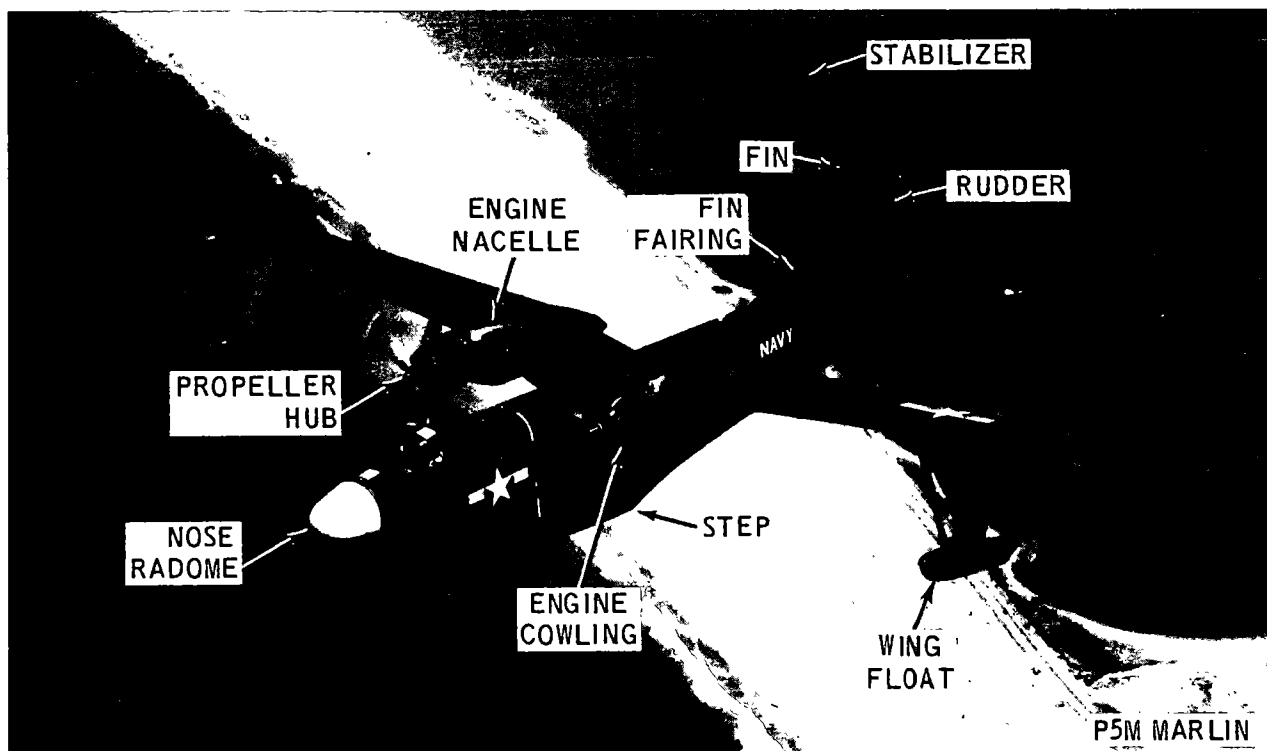
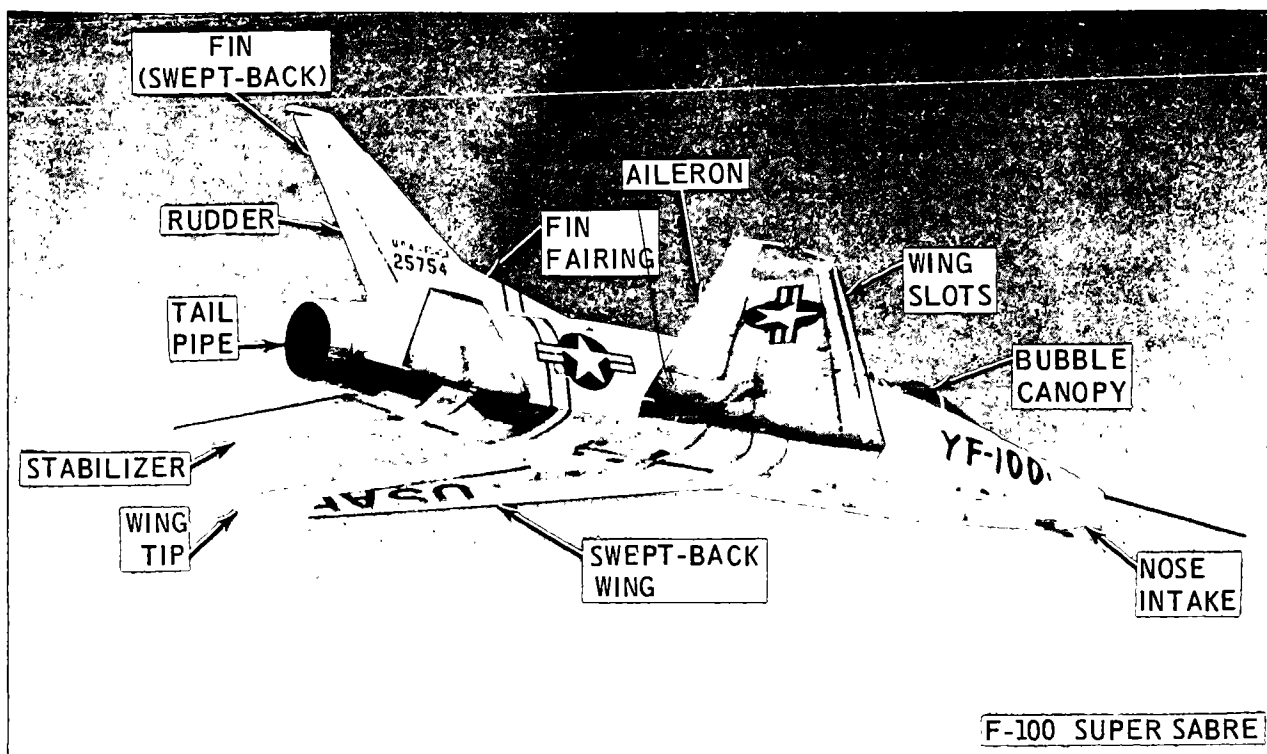
Ventral—Adjective pertaining to the “belly” or bottom portion of the fuselage.

Wing—Main supporting surface or airfoil of an airplane. Wings are often classified by their plan shapes, the most usual of which are:
Elliptical—Leading and trailing edges are elliptical in general shape.
Straight—Leading and trailing edges are straight, parallel, and at right angles to the direction of flight.
Tapered—Leading and/or trailing edges are straight but not at right angles to the direction of flight, so that the wing diminishes in chord from the root to the tip.

Wings are also classified by their front-view shape:
Dihedral—Wing axis slopes up (positive) or down (negative) from the root to the tip.
Gull—Center panel has positive dihedral and the outer panel is horizontal or has less positive dihedral.
Horizontal—Wing axis forms a horizontal line.
Inverted Gull—Center panel has negative dihedral and the outer panel is horizontal or has positive dihedral.

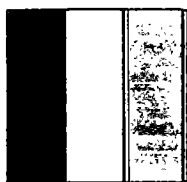
Wing, Flying—A tailless aircraft, in which an arrowheadlike wing constitutes the entire or major part of the airframe.



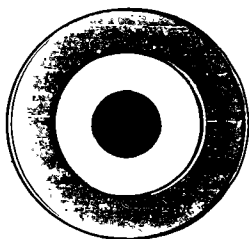


Annotated Aircraft Illustrations

AFGHANISTAN



RUDDER

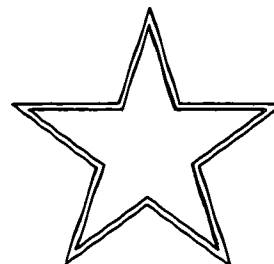


WINGS

ALBANIA

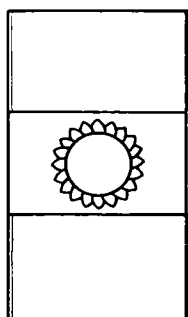


FIN FLASH

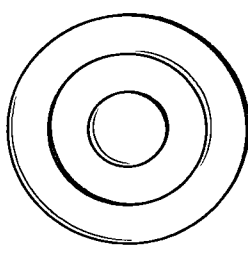


WINGS AND FUSELAGE

ARGENTINA



RUDDER

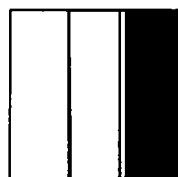


ARMY
(ALSO ON FUSELAGE)
WINGS

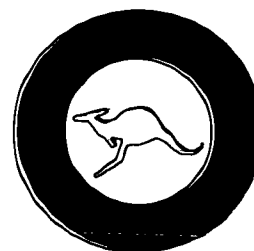


NAVY

AUSTRALIA

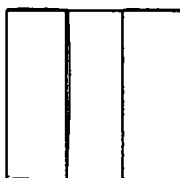


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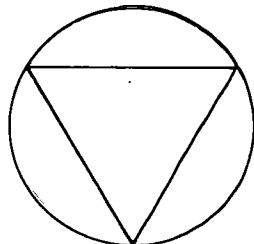


WINGS AND FUSELAGE

AUSTRIA



FIN FLASH

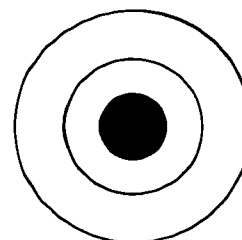


WINGS AND FUSELAGE

BELGIUM

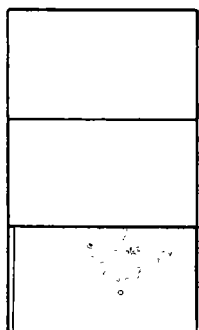


RUDDER

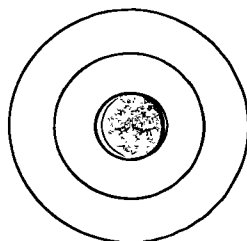


WINGS AND FUSELAGE

BOLIVIA

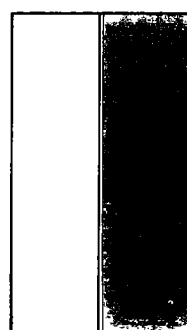


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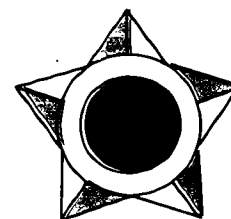


WINGS AND FUSELAGE

BRAZIL



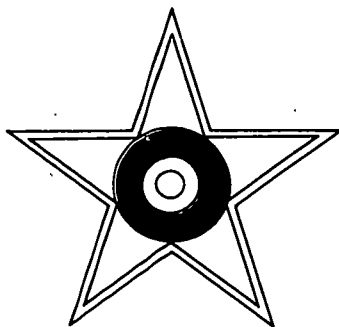
RUDDER



WINGS

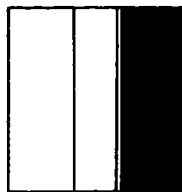
National Military Aircraft Markings

BULGARIA

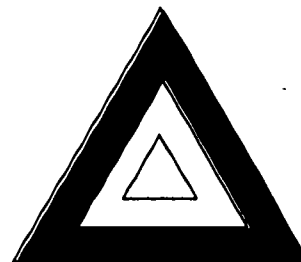


WINGS AND FUSELAGE

BURMA

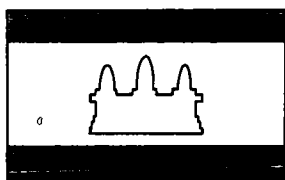


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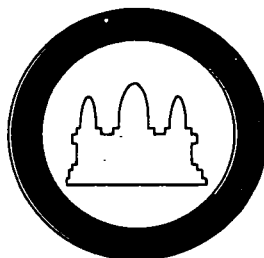


WINGS AND FUSELAGE

CAMBODIA



FIN FLASH

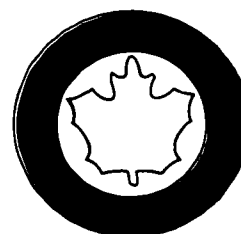


WINGS AND FUSELAGE

CANADA



FIN FLASH

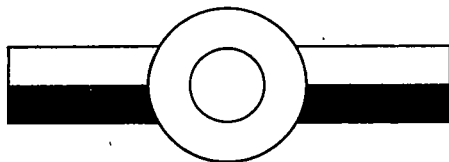


WINGS AND FUSELAGE

CEYLON



FIN FLASH

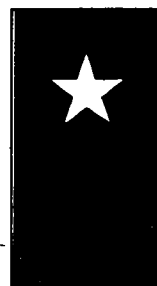


WINGS AND FUSELAGE

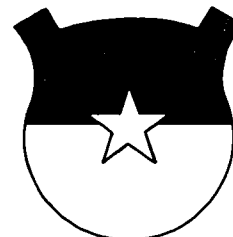
CHILE



NAVY

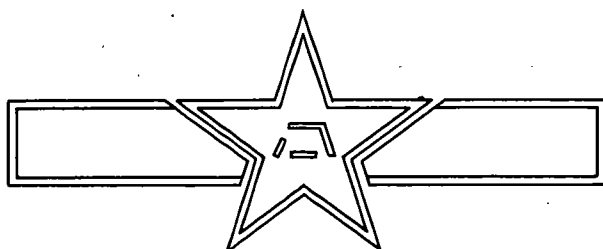


AIR FORCE
RUDDER



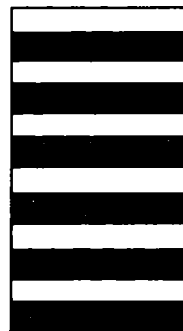
WINGS

CHINA—COMMUNIST

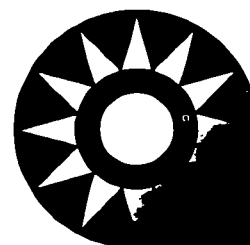


WINGS AND FUSELAGE

CHINA—NATIONALIST



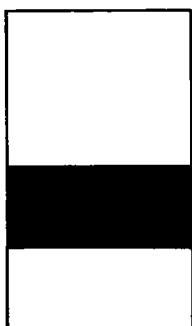
RUDDER



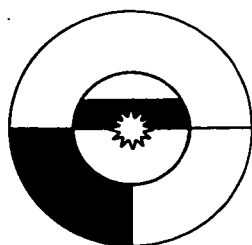
WINGS

National Military Aircraft Markings

COLOMBIA



RUDDER

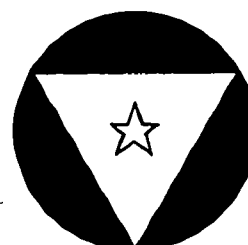


WINGS

CUBA

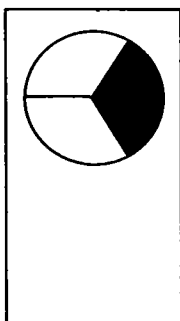


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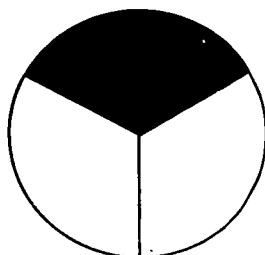


WINGS

CZECHOSLOVAKIA

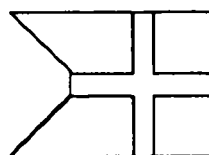


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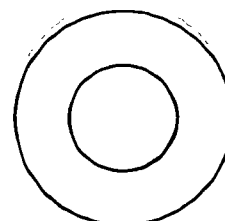


WINGS

DENMARK

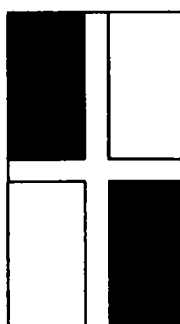


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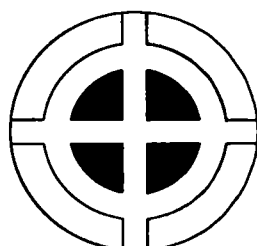


WINGS AND FUSELAGE

DOMINICAN REPUBLIC

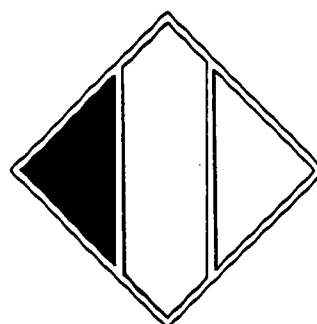


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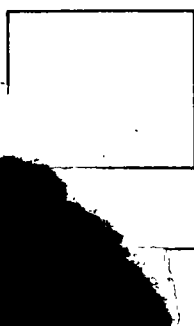
WINGS

EAST GERMANY

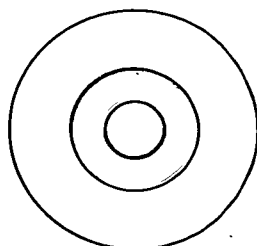


WINGS, FUSELAGE AND FIN

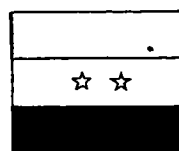
ECUADOR



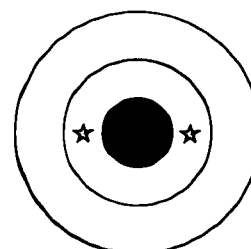
WINGS



EGYPT



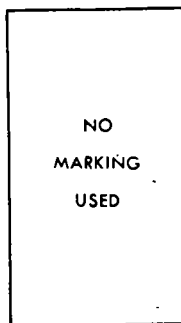
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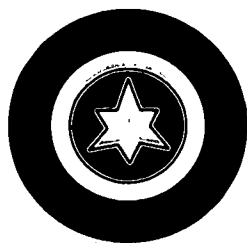
WINGS AND FUSELAGE

National Military Aircraft Markings

ETHIOPIA

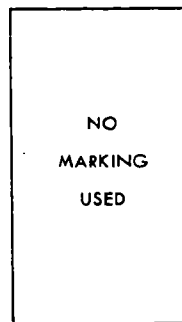


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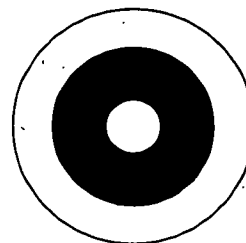


WINGS AND FUSELAGE

FINLAND

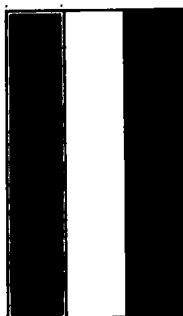


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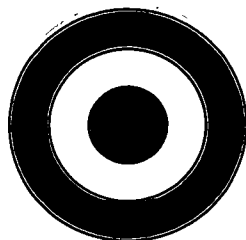


WINGS AND FUSELAGE

FRANCE—AIR FORCE



RUDDER



WINGS AND FUSELAGE

FRANCE—NAVY

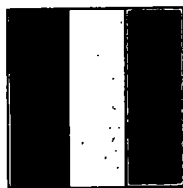


RUDDER



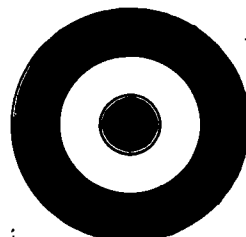
WINGS AND FUSELAGE

GREAT BRITAIN



(NOT ON NAVAL AIRCRAFT)

FIN FLASH

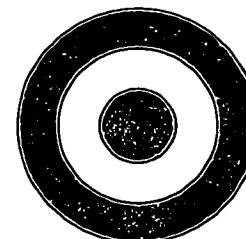


WINGS AND FUSELAGE

GREECE

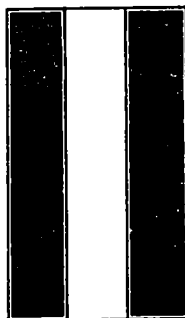


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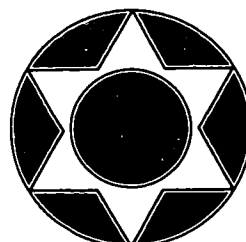


WINGS AND FUSELAGE

GUATEMALA

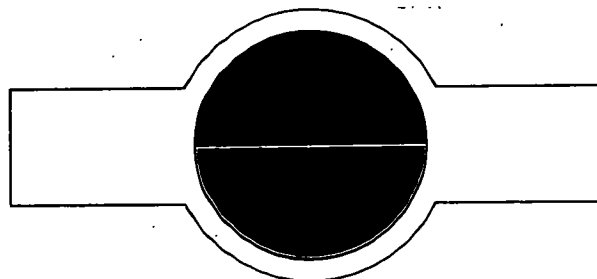


RUDDER



WINGS

HAITI



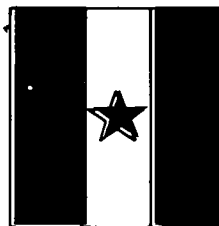
WINGS AND FUSELAGE

National Military Aircraft Markings

HONDURAS

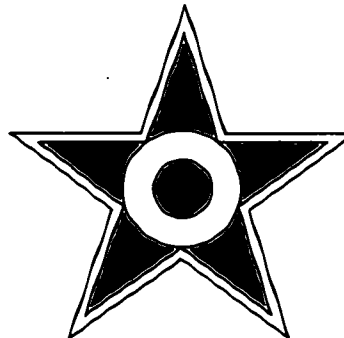


RUDDER



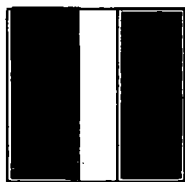
WINGS

HUNGARY

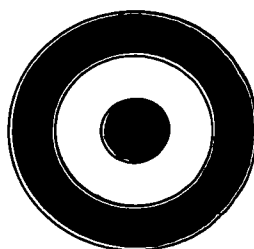


WINGS AND FUSELAGE

INDIA



FIN FLASH

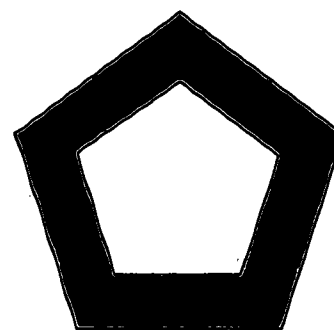


WINGS AND FUSELAGE

INDONESIA



FIN FLASH

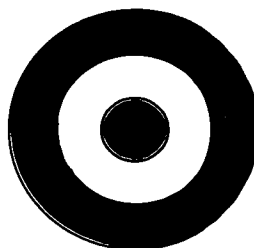


WINGS AND FUSELAGE

IRAN



FIN FLASH

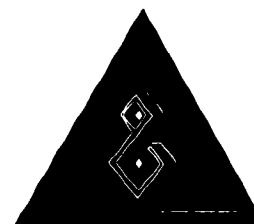


WINGS AND FUSELAGE

IRAQ

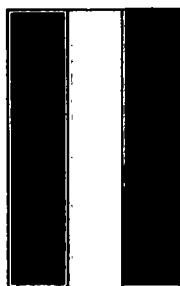


FIN FLASH

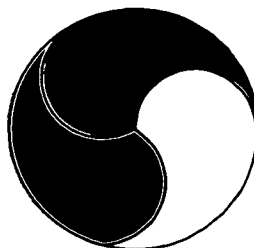


WINGS AND FUSELAGE

IRELAND

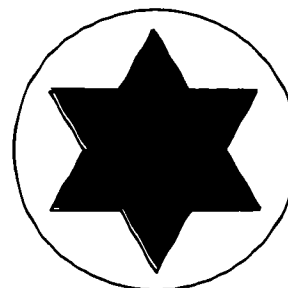


UNDERSURFACE OF WINGS



FUSELAGE AND
UPPER SURFACE OF WINGS

ISRAEL



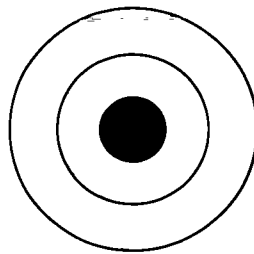
WINGS AND FUSELAGE

National Military Aircraft Markings

ITALY

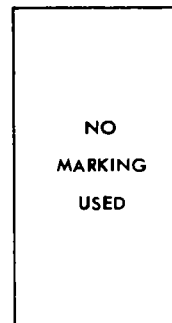


RUDDER

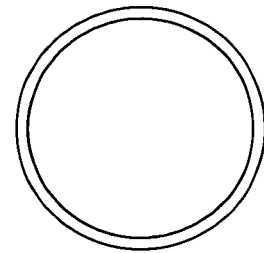


WINGS AND FUSELAGE

JAPAN



RUDDER

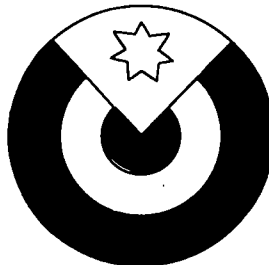


WINGS AND FUSELAGE

JORDAN

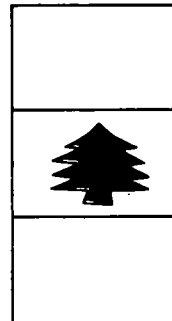


FIN FLASH

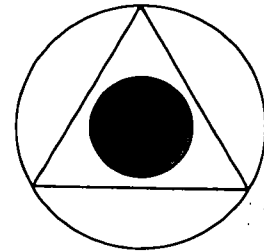


WINGS AND FUSELAGE

LEBANON

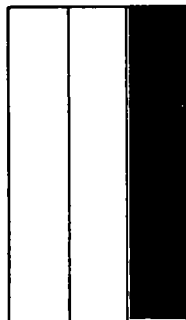


RUDDER

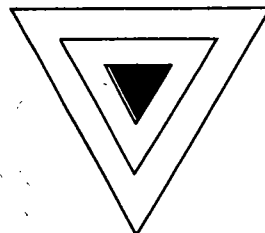


WINGS AND FUSELAGE

MEXICO

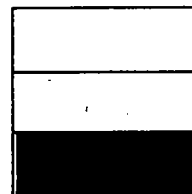


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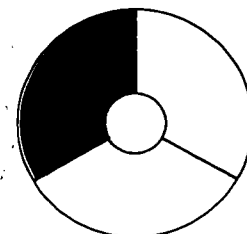


WINGS

NETHERLANDS

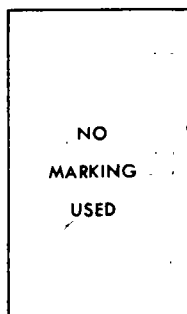


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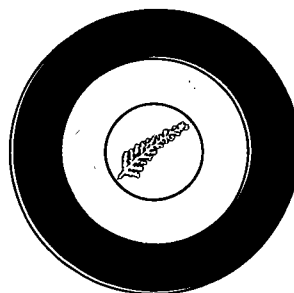


WINGS AND FUSELAGE

NEW ZEALAND

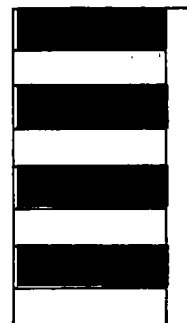


RUDDER

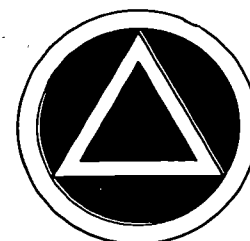


WINGS AND FUSELAGE

NICARAGUA



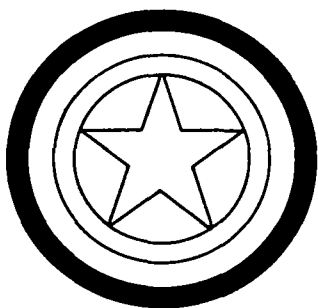
RUDDER



WINGS

National Military Aircraft Markings

NORTH KOREA

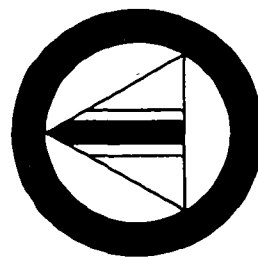


WINGS AND FUSELAGE

NORWAY



RUDDER

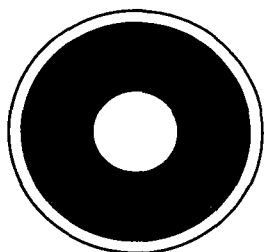


WINGS AND FUSELAGE

PAKISTAN



WHITE BORDER REPLACED BY YELLOW BORDER
ON ALL CAMOUFLAGED (GREEN) AIRCRAFT
FIN FLASH

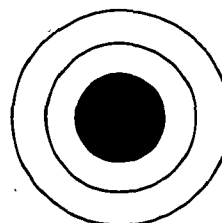


WINGS AND FUSELAGE

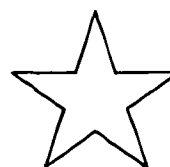
PARAGUAY



RUDDER

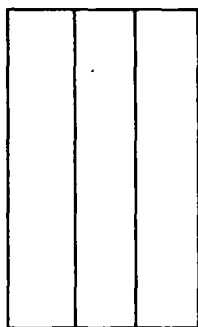


WINGS

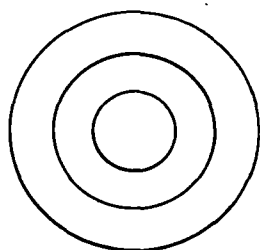


FUSELAGE

PERU

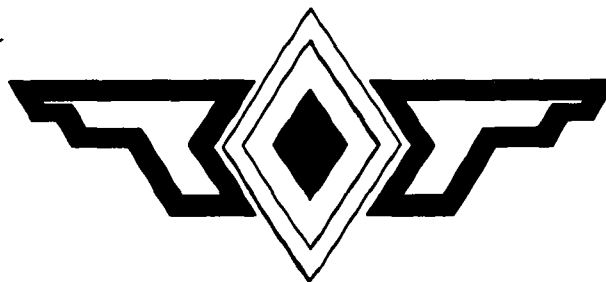


RUDDER



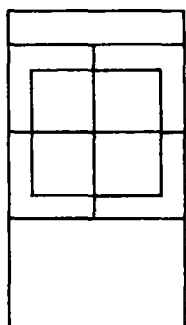
WINGS

PHILIPPINES

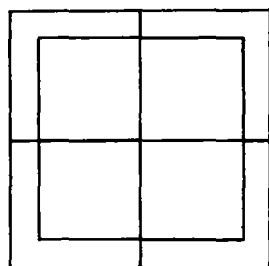


WINGS AND FUSELAGE

POLAND

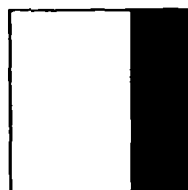


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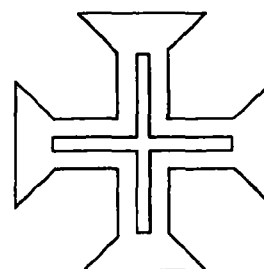


WINGS AND FUSELAGE

PORTUGAL



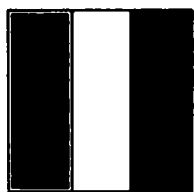
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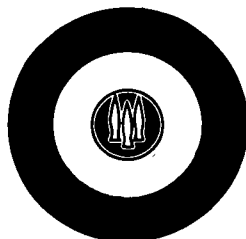
WINGS

National Military Aircraft Markings

RHODESIA & NYASALAND

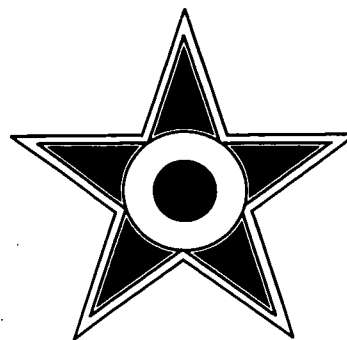


FIN FLASH



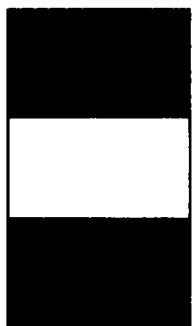
WINGS AND FUSELAGE

RUMANIA

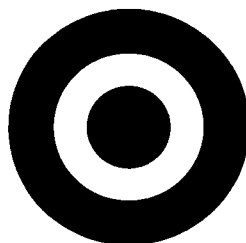


WINGS AND FUSELAGE

SALVADOR



RUDDER

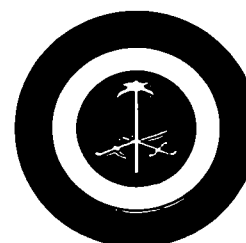


WINGS

SAUDI ARABIA



FIN FLASH



WINGS AND FUSELAGE

UNION OF SOUTH AFRICA

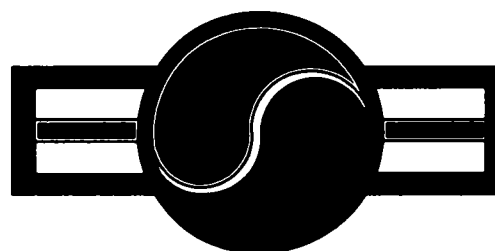


FIN FLASH



WINGS AND FUSELAGE

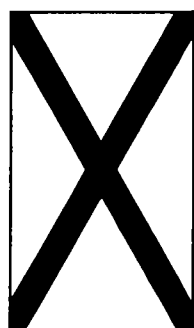
SOUTH KOREA



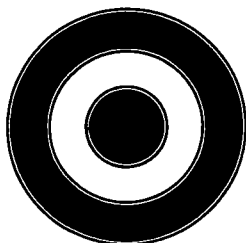
BLACK BORDER REPLACED BY ORANGE BORDER
ON ALL LIAISON (OLIVE DRAB) AIRCRAFT

WINGS AND FUSELAGE

SPAIN



RUDDER

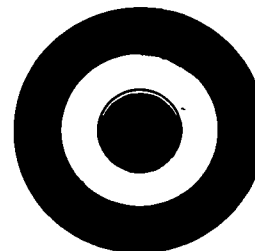


WINGS AND FUSELAGE

SUDAN



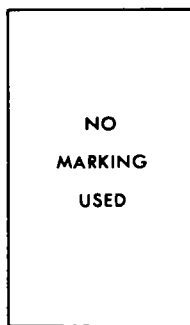
FIN FLASH



WINGS AND FUSELAGE

National Military Aircraft Markings

SWEDEN

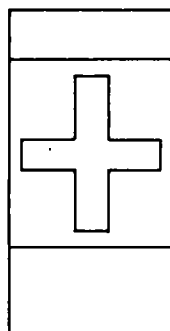


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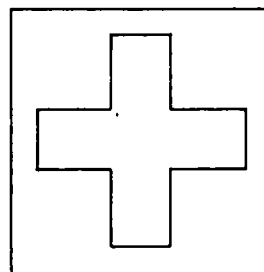


WINGS AND FUSELAGE

SWITZERLAND

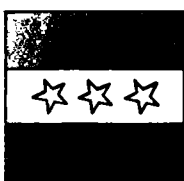


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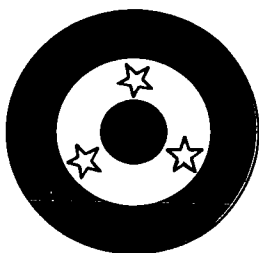


WINGS

SYRIA



FIN FLASH

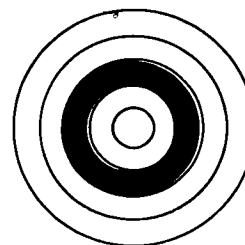


WINGS AND FUSELAGE

THAILAND (SIAM)

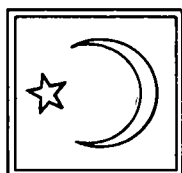


RUDDER

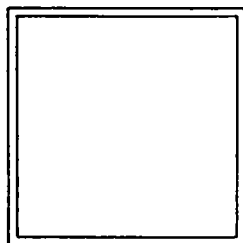


WINGS

TURKEY

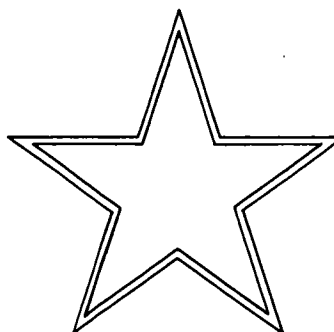


FIN FLASH



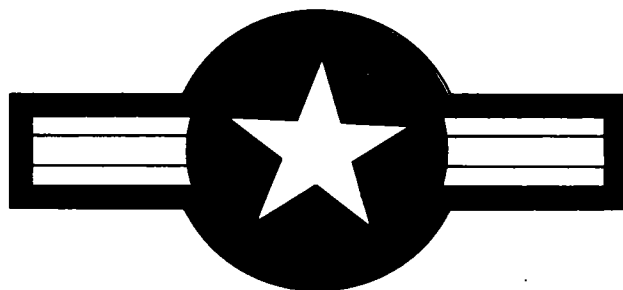
WINGS AND FUSELAGE

U.S.S.R.



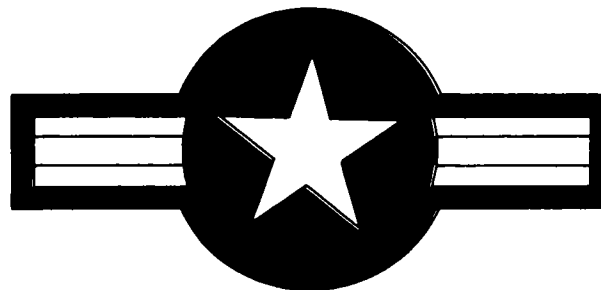
RUDDER, WINGS AND FUSELAGE

UNITED STATES AIR FORCE



WINGS AND FUSELAGE

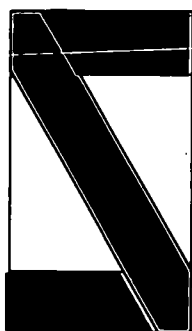
UNITED STATES NAVY



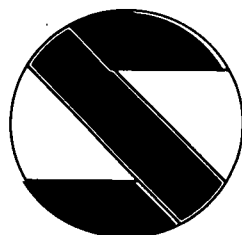
WINGS AND FUSELAGE

National Military Aircraft Markings

URAGUAY ARMY



RUDDER

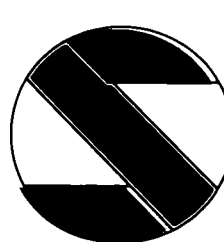


WINGS

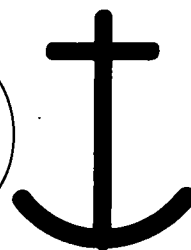
URAGUAY NAVY



RUDDER



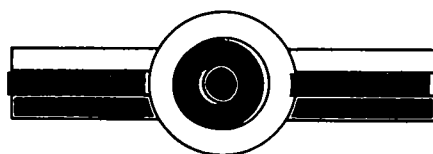
WINGS



VENEZUELA

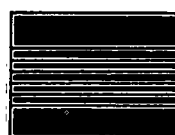


RUDDER

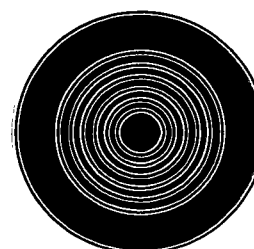


WINGS AND FUSELAGE

VIETNAM

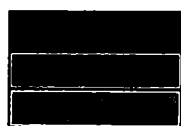


FIN FLASH

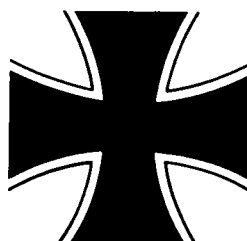


WINGS AND FUSELAGE

REPUBLIC OF WEST GERMANY



FIN FLASH

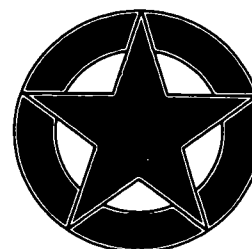


WINGS AND FUSELAGE

YUGOSLAVIA



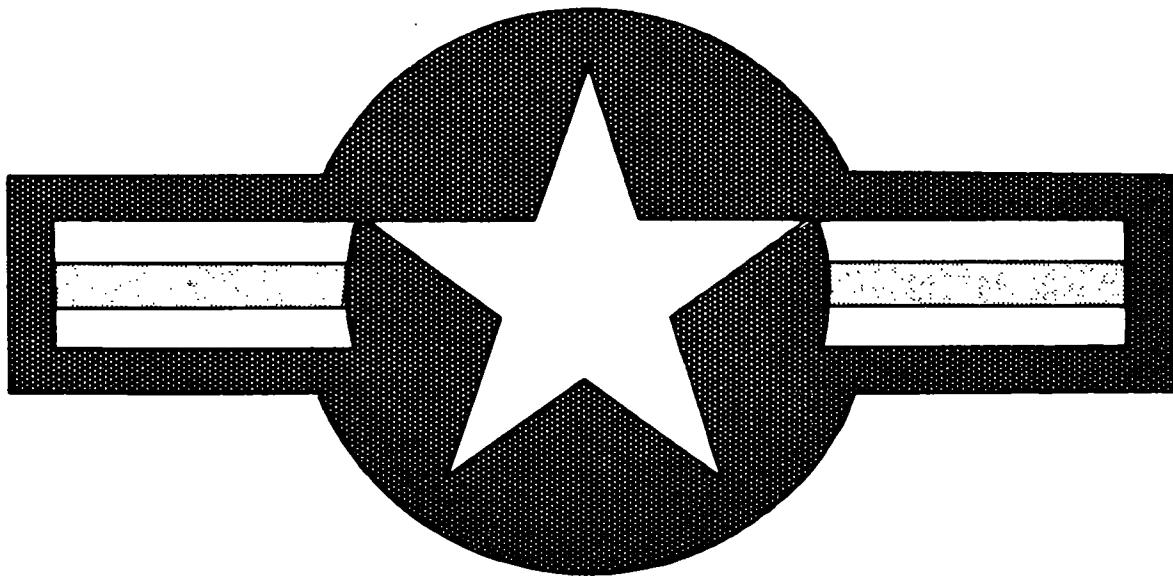
FIN FLASH



WINGS AND FUSELAGE

National Military Aircraft Markings

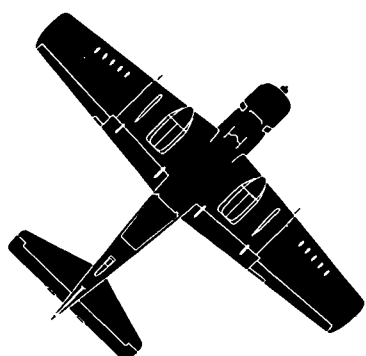
MAJOR
U. S. NAVY
AIRCRAFT



U.S.N.



AD-6

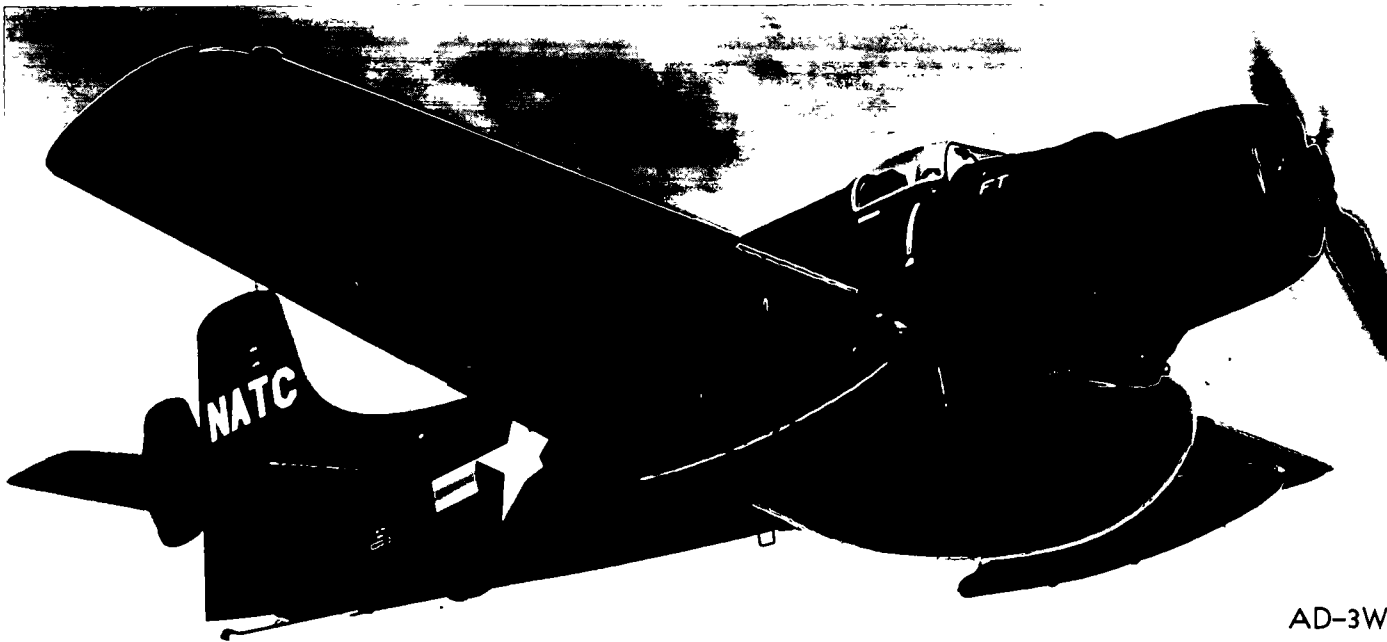


The AD Skyraider has undergone considerable development, producing the AD-1 through the AD-7. In addition to these principal versions, a number of E, N, Q, W, and S modifications have been produced. All told, 49 versions of the seven basic types have been built. These aircraft differ in the shape of cockpit canopy, the presence of fins on the stabilizer, a large radar bulge under the fuselage, and various electronic gear, torpedo fittings, and rocket mountings for ordnance. Originally designed to carry a 1,000-lb bomb load, Skyraiders operated in Korea with bomb loads of over 10,500 lbs, which are larger than those carried by the four-engined B-17 Flying Fortress in World War II.

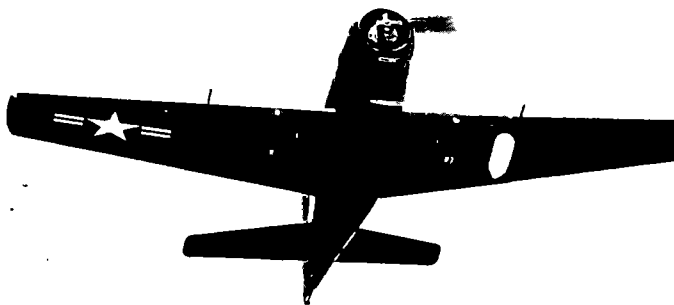
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DOUGLAS	Max. Range (Naut. Miles)	1,100 plus	No. of Engines	1
Wing Span	50'	Crew No.	1-3	Model No.	R-3350-26WA
Length	39'	Max. Speed (Knots)	300	Mfr.	WRIGHT
Combat Weight (Lbs.)	15,000 plus	Service Ceiling (Ft.)	28,000 plus	Type	Piston
				Rating Each	2,700 hp.

AD SKYRAIDER

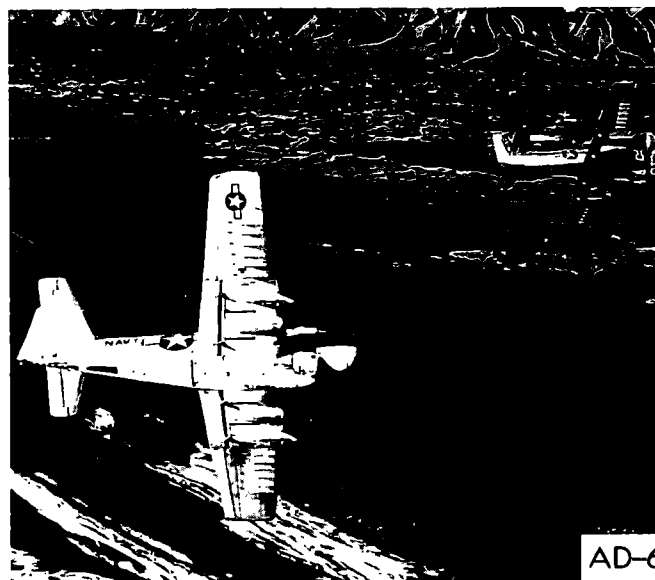
DOUGLAS



AD-3W



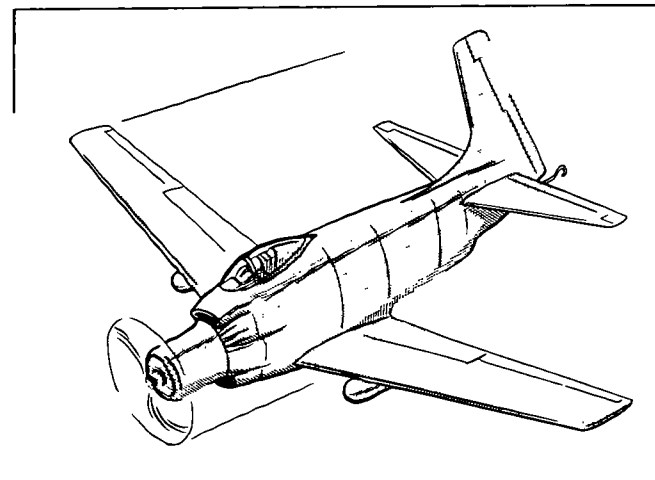
AD-1

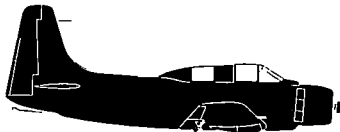
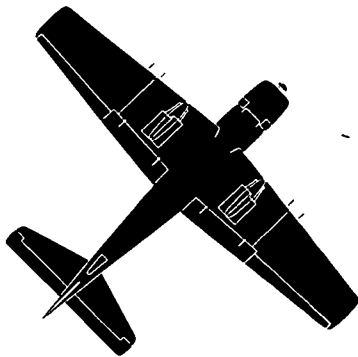
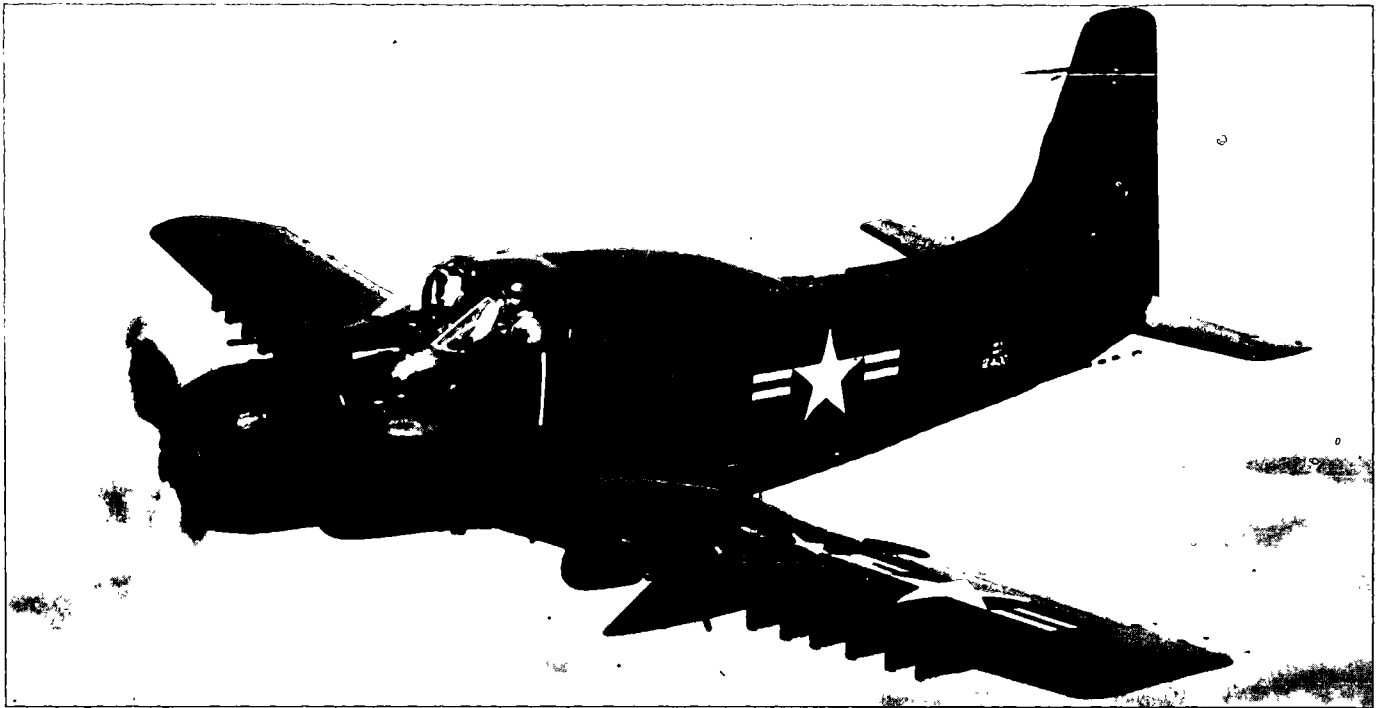


AD-6



AD-6



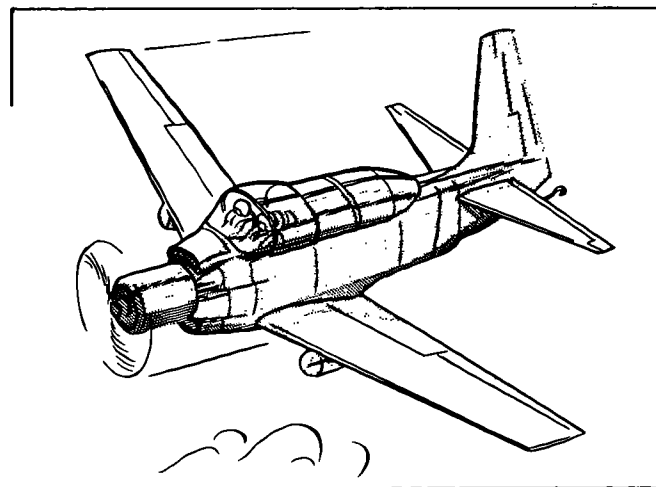
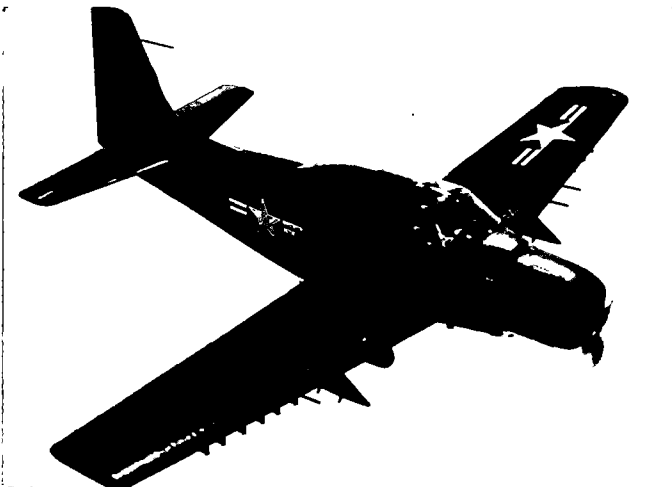
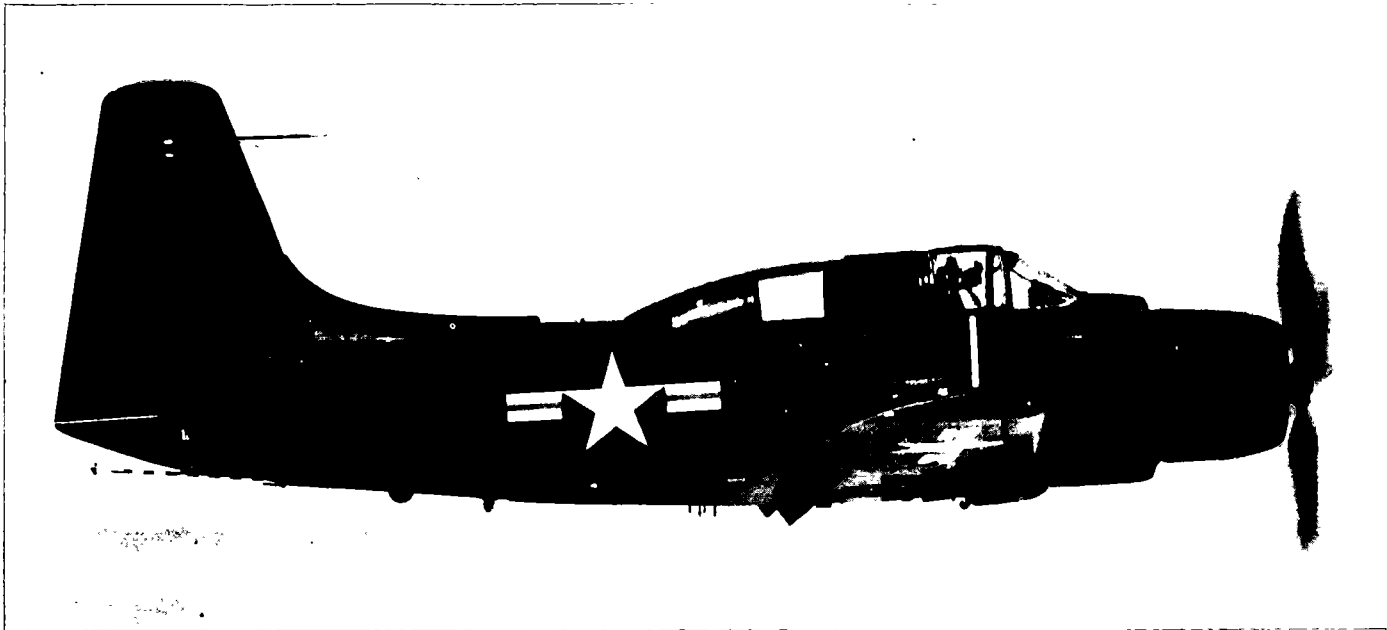


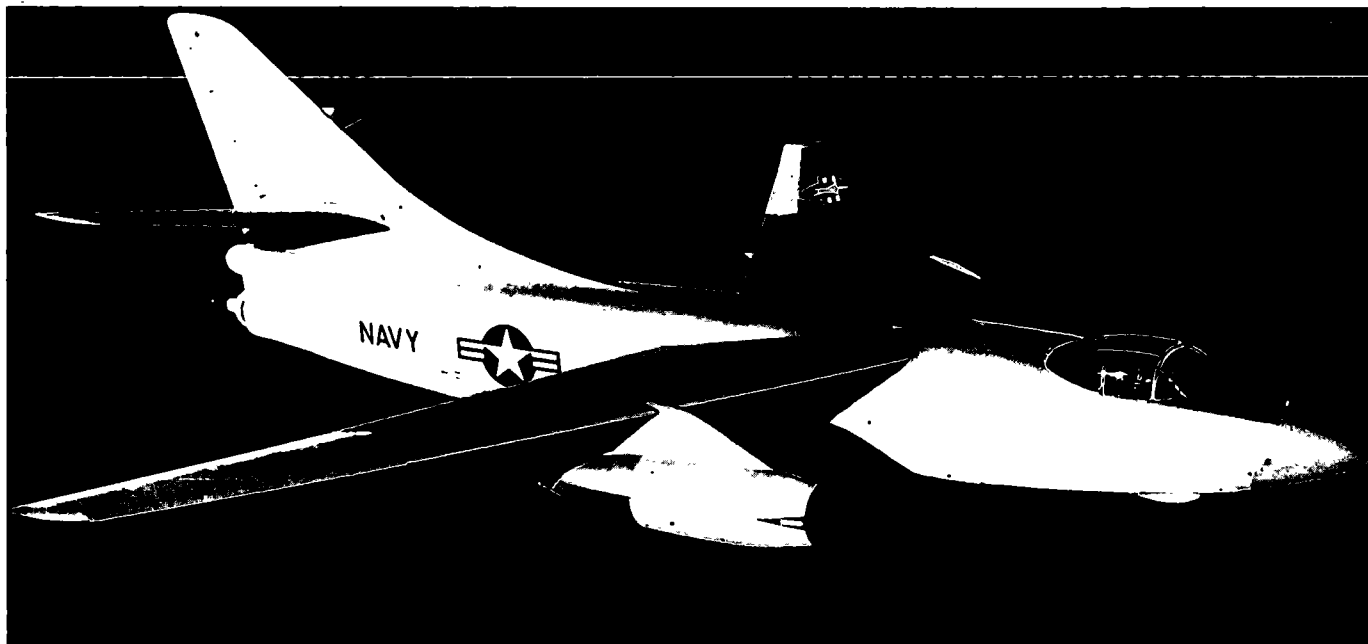
The AD-5 Skyraider is a development of the AD series incorporating a side-by-side seating arrangement, increased armament, improved equipment arrangement, enlarged vertical tail, and improved aerodynamic characteristics. Although its principal missions are general-purpose attack and ground support, the AD-5 is also an effective torpedo, mine layer, or scout aircraft capable of operating from carriers or land bases. Because the structural and armament provisions of all planes in the AD-5 series are similar, the basic aircraft can be converted with standard kits to any 1 of 12 or more combat or tactical versions, including day- or night-attack, photographic-reconnaissance, target-tow, and radar-equipped multi-seat, passenger-carrying, and ambulance aircraft.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DOUGLAS	Max. Range (Naut. Miles)	1,100 plus	No. of Engines	1
Wing Span	50'	Crew No.	1-2	Model No.	R-3350-26WA
Length	39'	Max. Speed (Knots)	285	Mfr.	WRIGHT
Combat Weight (Lbs.)	16,000	Service Ceiling (Ft.)	28,000 plus	Type	Piston
				Rating Each	2,700 hp

AD-5 SKYRAIDER

DOUGLAS

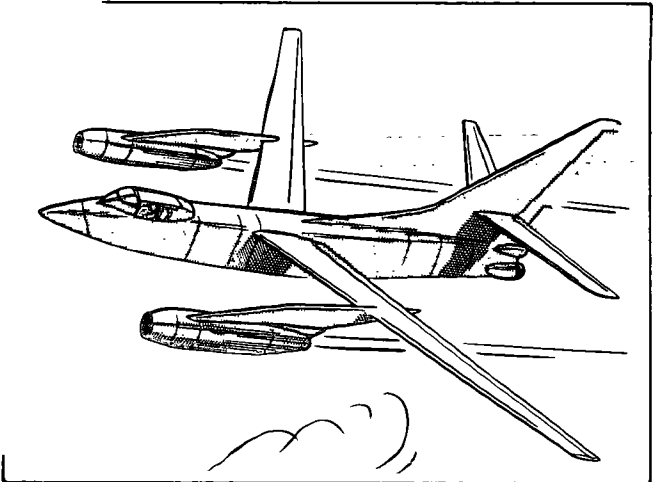
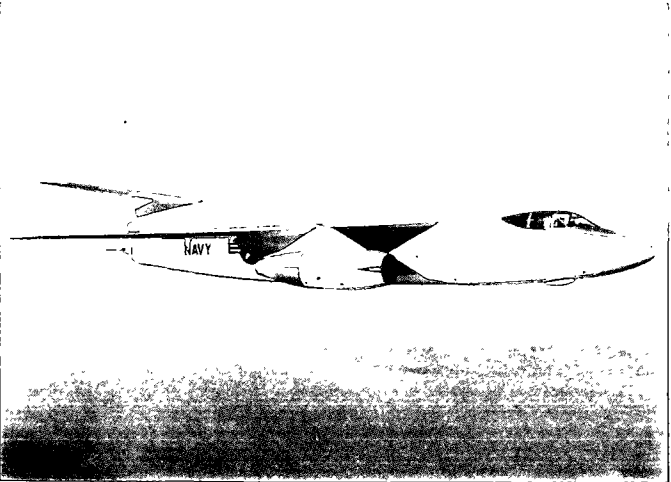


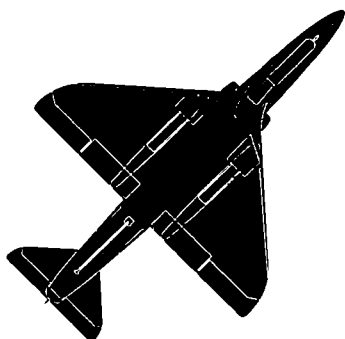
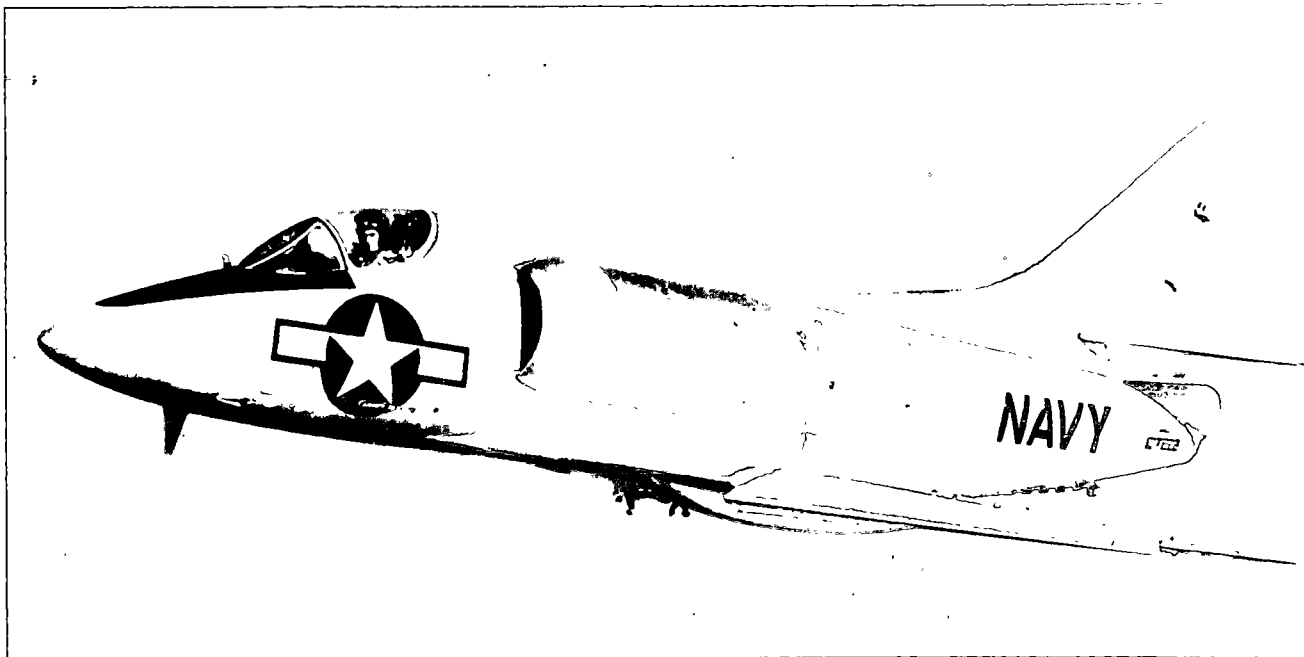


The A3D Skywarrior is a twin-jet swept-wing-and-tail bomber whose primary mission is the attack and destruction of enemy ground and surface targets. Although designed chiefly as an atomic bomber, the three-man-crew A3D is highly versatile and can be used for many other missions. It is capable of delivering, from an aircraft carrier or shore base, virtually any weapon in the Navy's arsenal. It is recognized by the high-mounted wings, the huge vertical tail assembly, the cockpit located well forward in the fuselage, and the pointed nose. Though large for a carrier-type aircraft, the A3D is small in comparison with other aircraft in its class, having a wingspan of only 72½ ft. As protection against enemy fighters, a radar remote-controlled turret, containing rapid-firing cannon, is installed in the tail.

DATA APPLY TO A3D-2

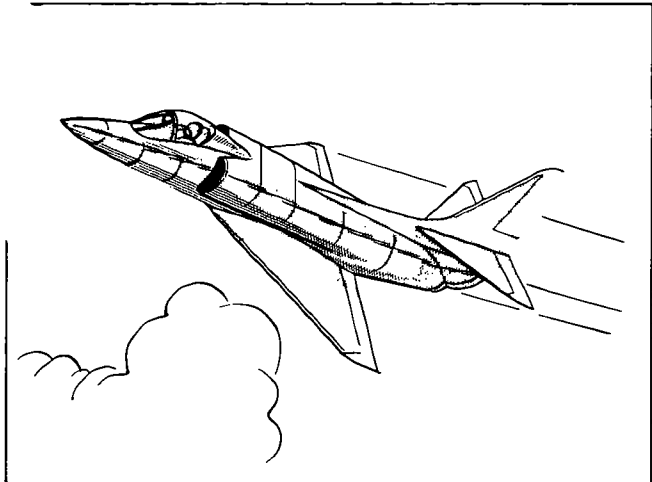
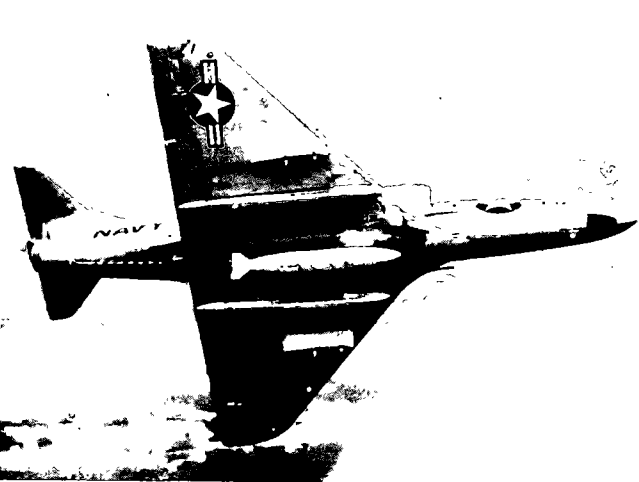
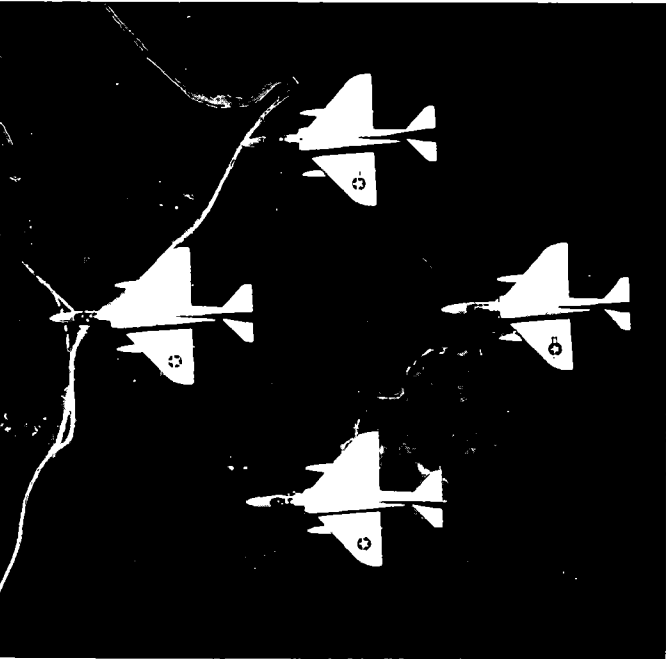
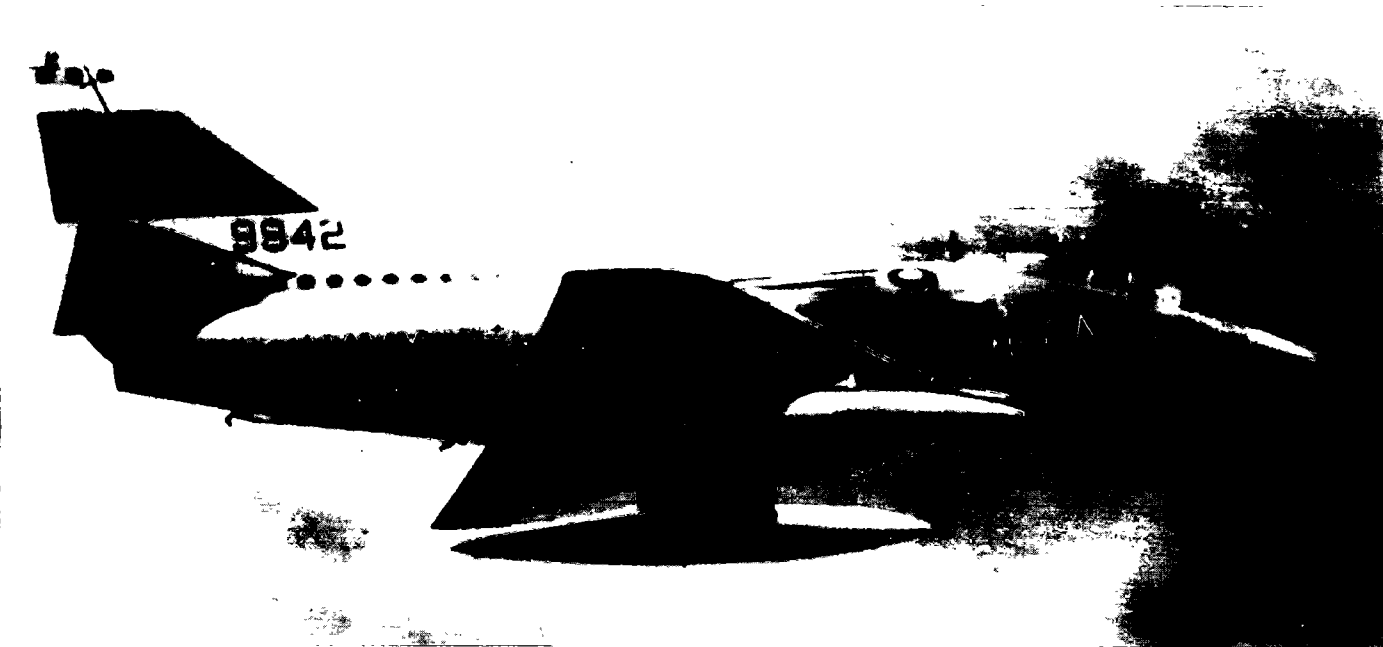
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DOUGLAS	Max. Range (Naut. Miles)	2,100 plus	No. of Engines	2
Wing Span	72'6"	Crew No.	3	Model No.	J57-P-10
Length	76"	Max. Speed (Knots)	535	Mfr.	P & W
Combat Weight (Lbs.)	59,000 plus	Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	10,000#

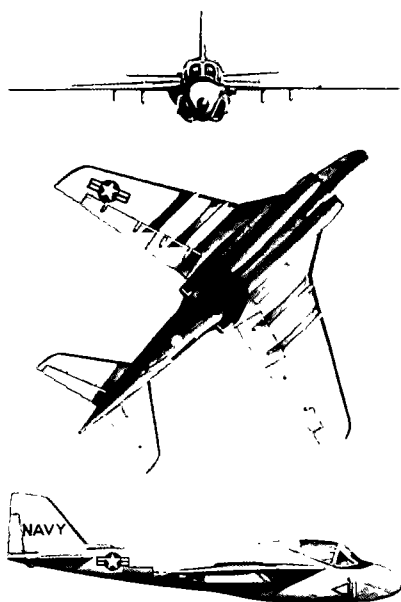
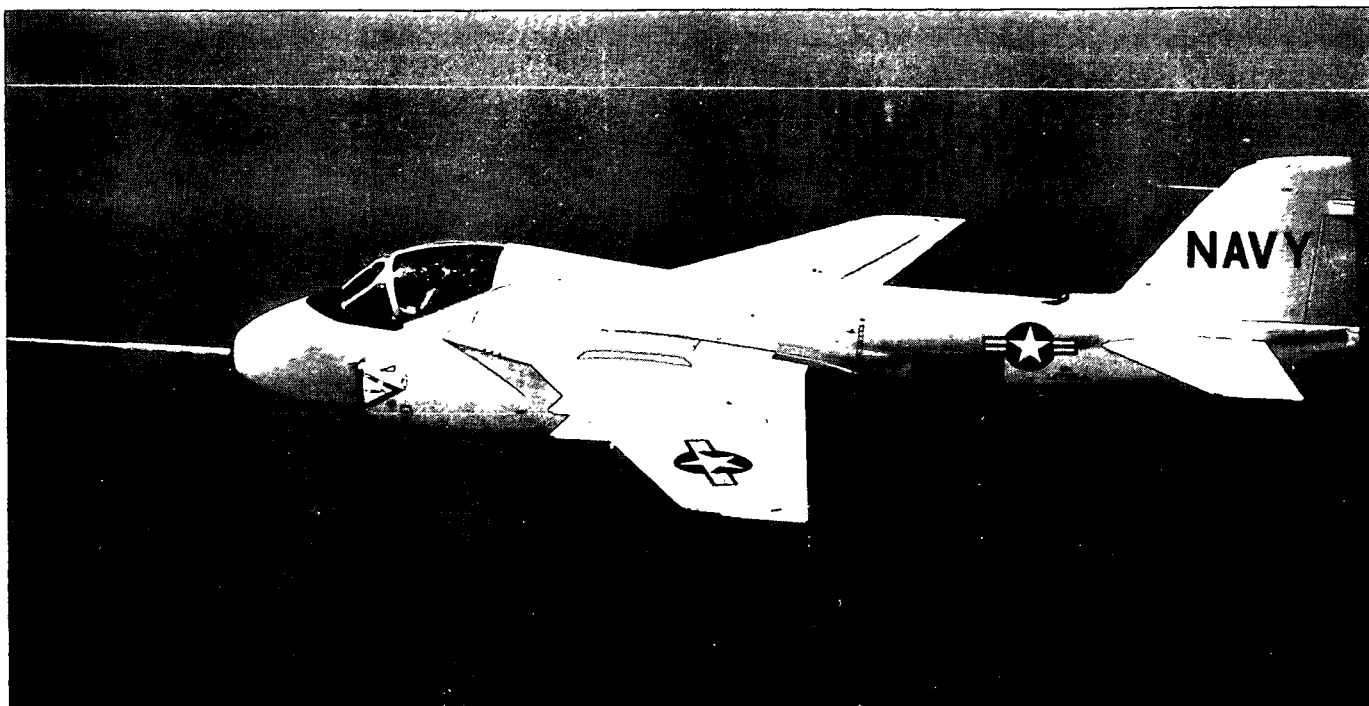




The A4D Skyhawk is a single-seat, low-wing, jet attack bomber. An outstanding recognition feature is its small size; it claims the distinction of being the only contemporary U.S. carrier-based aircraft compact enough not to require folding wings. Other recognition features include the short, stubby delta wing; the large, triangular vertical fin; and the sharply tapered, short needle nose. The A4D is capable of carrying atom bombs, rockets, and missiles, in addition to other, conventional weapons. Its suitability for carrier use is enhanced by its low approach and stalling speed.

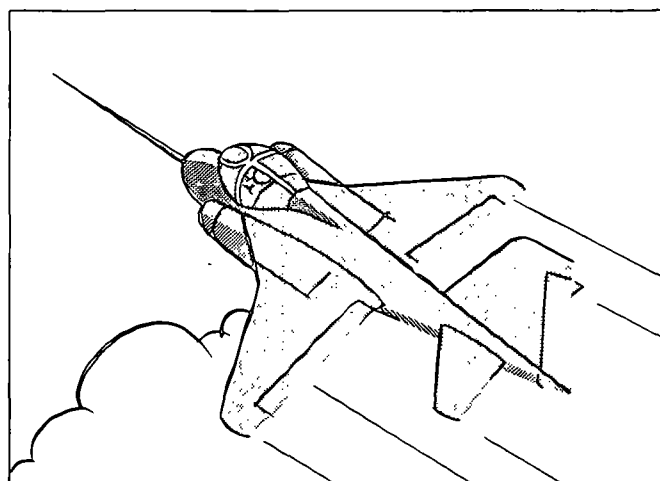
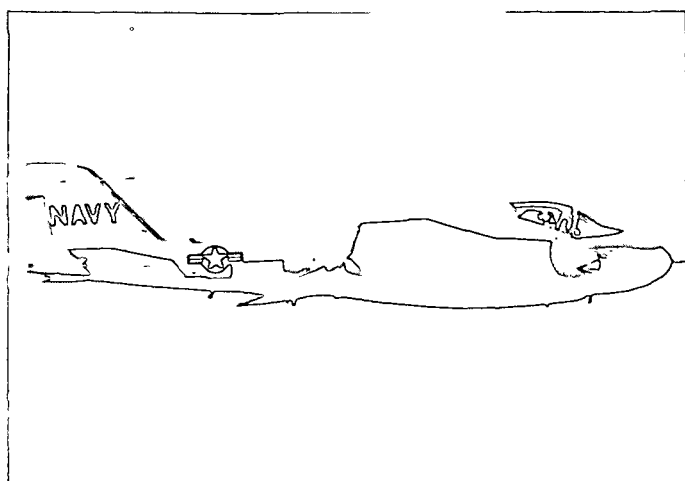
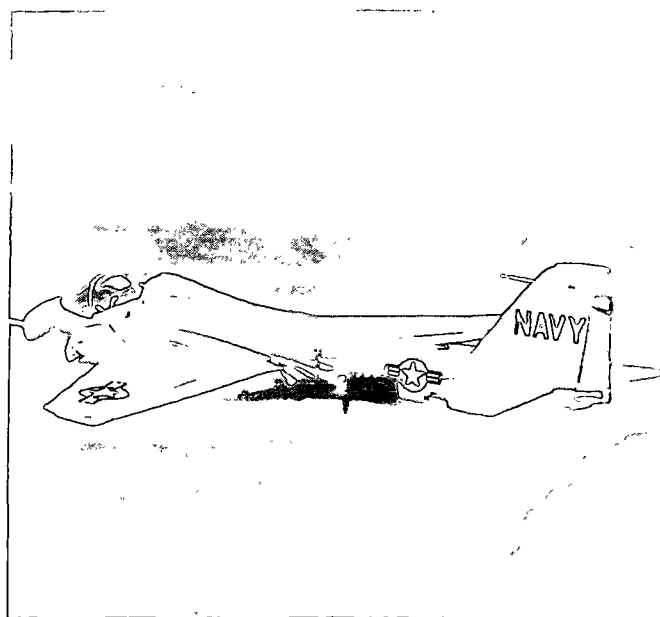
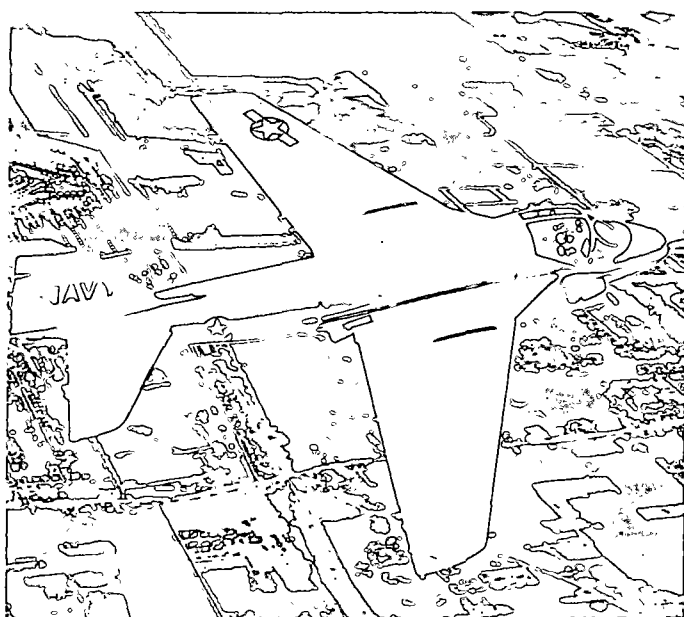
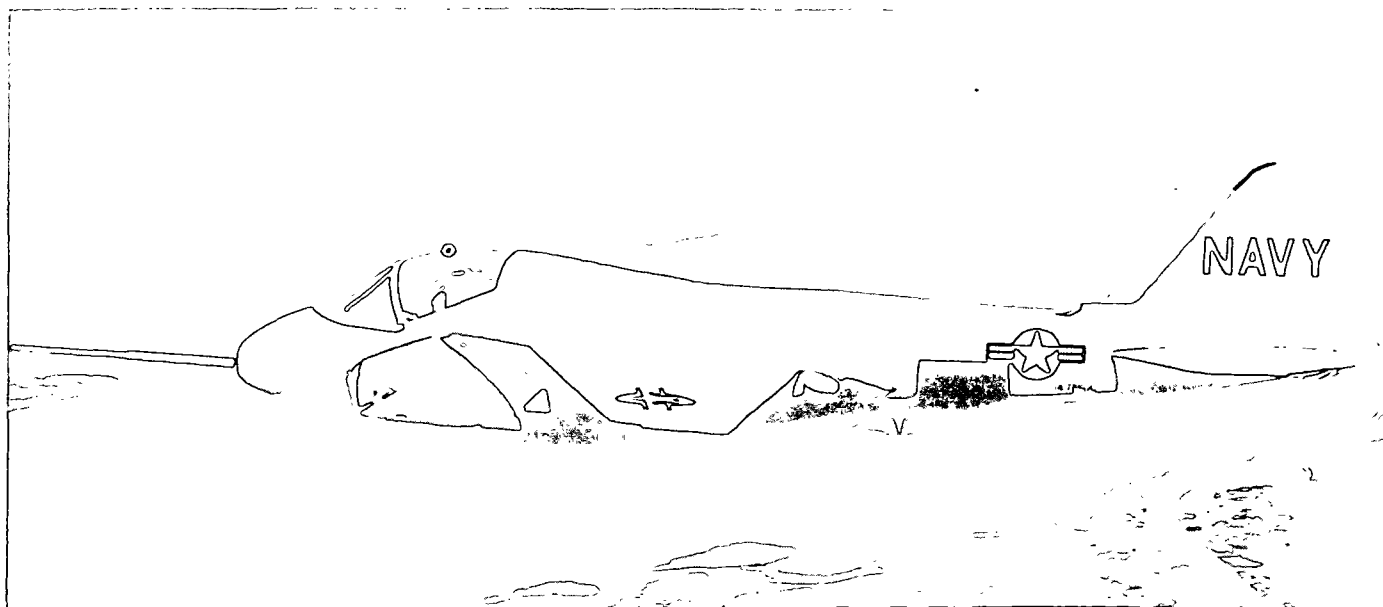
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DOUGLAS	Max. Range (Naut. Miles)	1,300 plus	No. of Engines	1
Wing Span	27'	Crew No.	1	Model No.	J65-W-4
Length	39'	Max. Speed (Knots)	590	Mfr.	WRIGHT
Combat Weight (Lbs.)	12,000	Service Ceiling (Ft.)	40,000 plus	Type	Turbojet
				Rating Each	7,700#

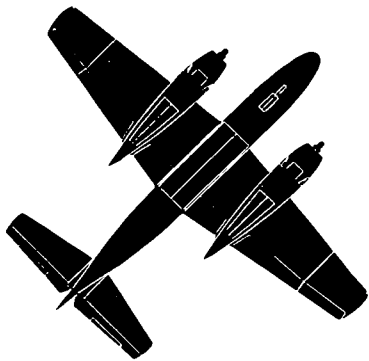
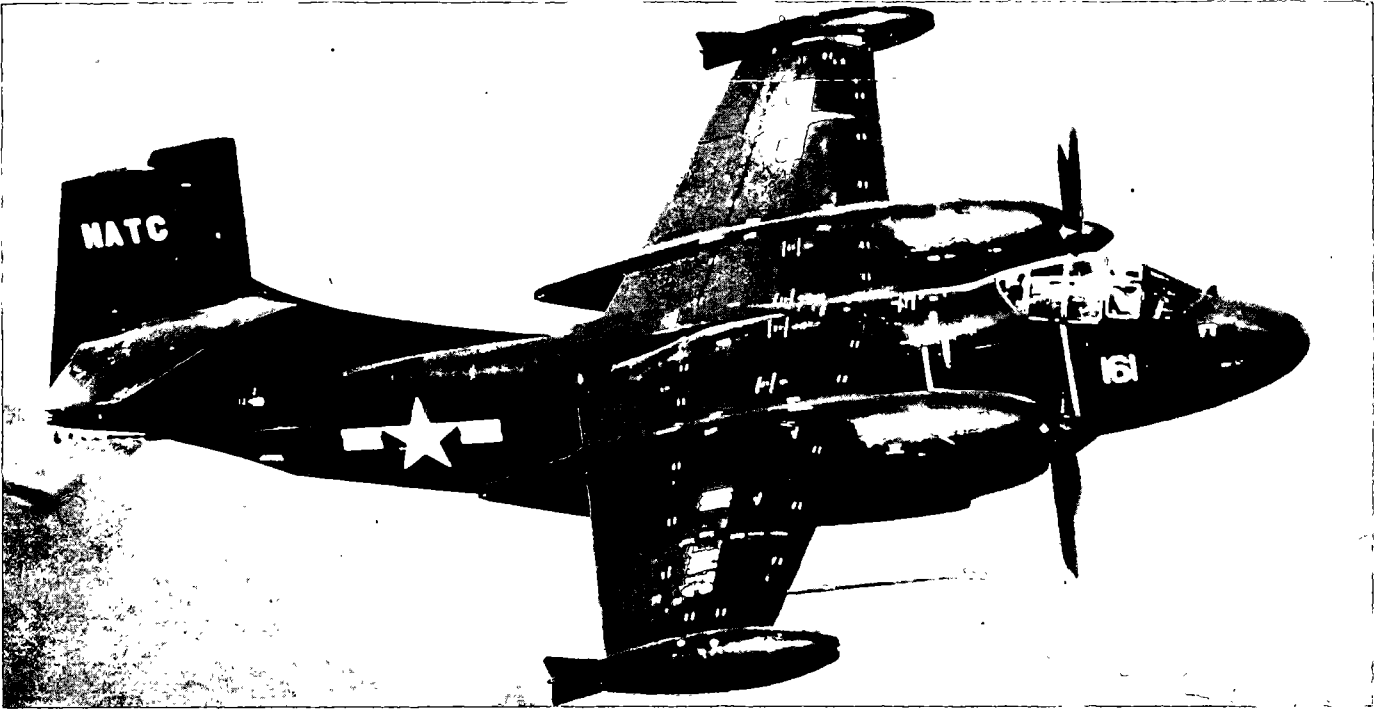




The A2F Intruder is the Navy's newest attack bomber. It is a two-place (pilot and radar operator side-by-side) swept-wing aircraft, powered by two J-52 P-6 Pratt and Whitney turbojet engines, located on each side of the fuselage. The A2F is a versatile aircraft capable of subsonic speeds as well as extended range. Its extremely sensitive radar and detection equipment can detect targets under all weather conditions. The A2F is designed for carrier use as well as for use on short runways. Recognition characteristics are: low slung intakes either side of the fuselage slightly forward of the wing root tapering back aft of the wing trailing edge; high-mounted sweptback wing with a slight negative dihedral appearance; and cockpit located well forward on the fuselage aft of a well rounded nose. The overall fuselage has an expanded tear drop appearance with a thickening effect through the engine area, then progressively thins and tapers to the tail. The horizontal stabilizer is set slightly forward of a large vertical stabilizer, the leading edge of which slants aft at approximately a 40° angle. The A2F is capable of carrying conventional as well as atomic weapons.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	GRUMMAN	Max. Range (Naut Miles)		No. of Engines	2
Wing Span	35'8"	Crew No.	2	Model No.	J52-P-6
Length	24'4"	Max. Speed (Knots)	Mach 0.9	Mfr.	P & W
Combat Weight (Lbs.)	54,000	Service Ceiling (Ft.)		Type	Turbojet
				Rating Each	8,500 #

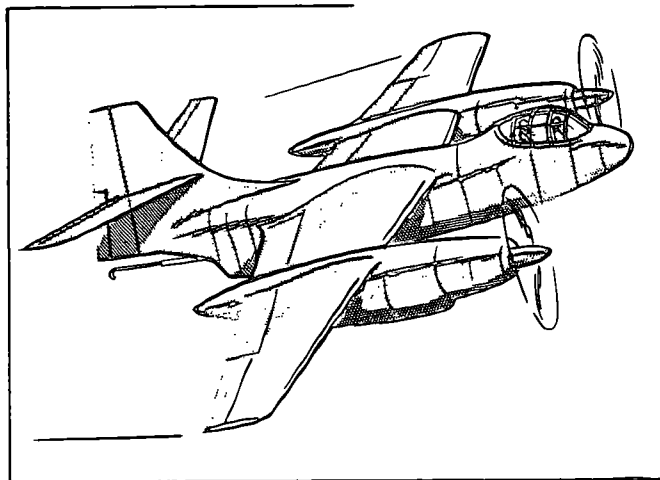
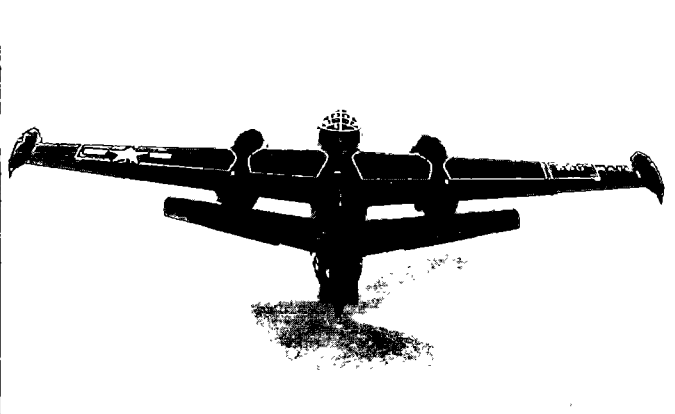
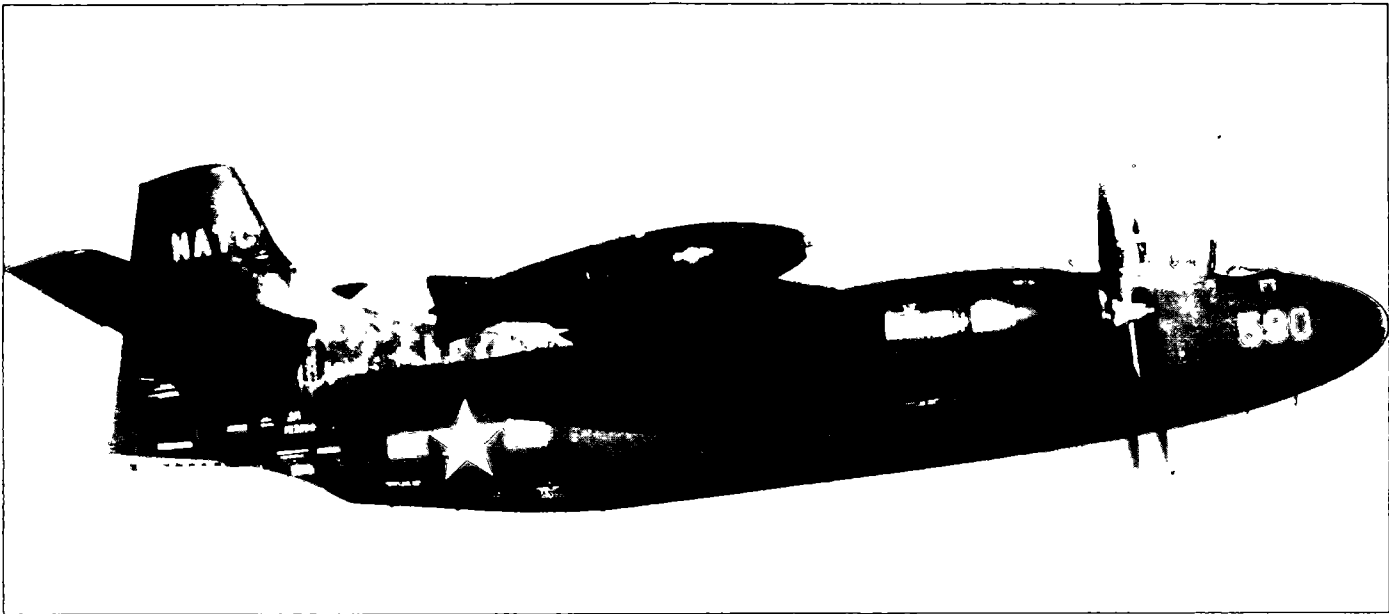


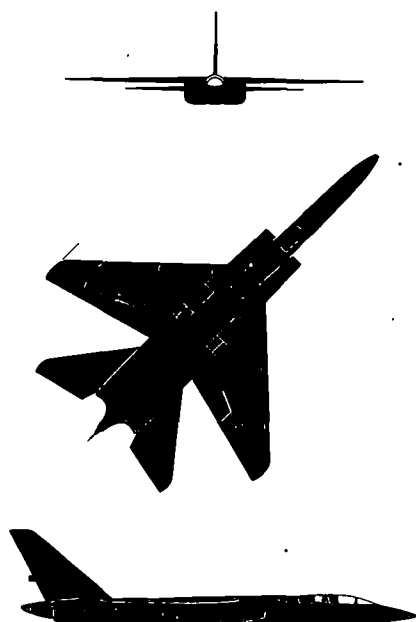


The AJ Savage is a composite-powered, carrier-based, attack aircraft capable of carrying an atomic bomb. Two reciprocating engines are used for normal operations, and a jet engine in the fuselage provides additional power when required. Jet air intake is located on the dorsal side of the fuselage just forward of the wing's trailing edge. The wings and vertical tail surfaces of the three-man-crew AJ fold for carrier stowage. A later version of the AJ-2 has a higher vertical fin, and the dihedral is removed from the horizontal stabilizer. The AJ-2P photographic reconnaissance version has a refaired nose section for accommodating camera gear, and increased fuel capacity. Its overall fuselage length is 2 feet greater than that of the AJ-1, while the AJ-2 is just a foot longer.

DATA APPLY TO AJ-2

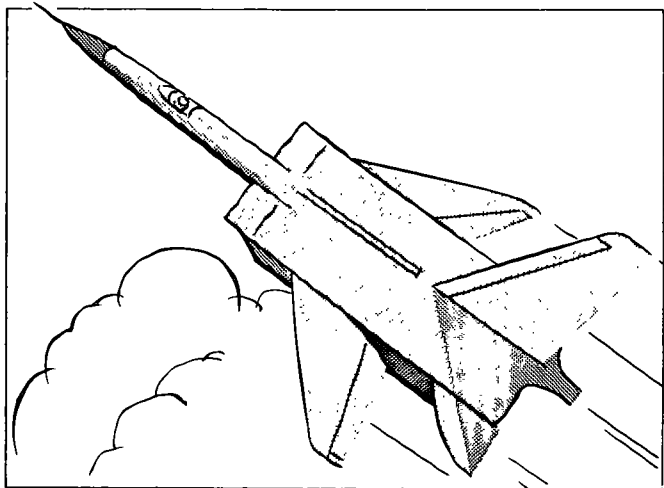
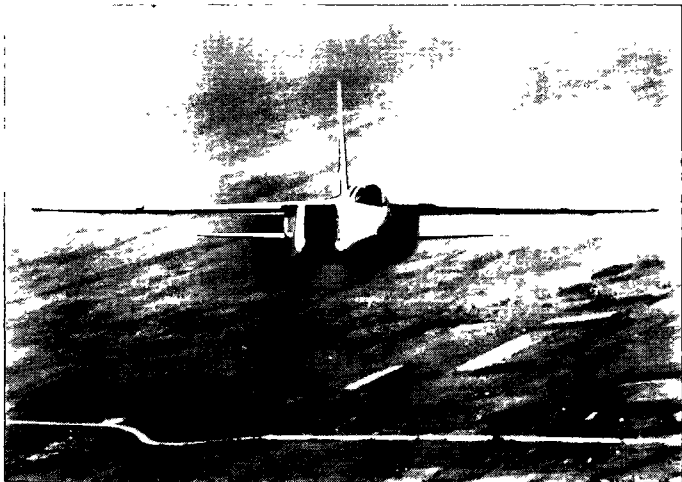
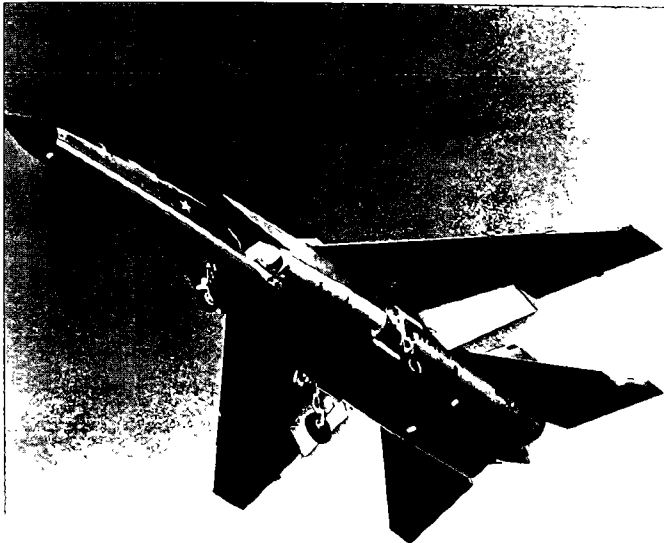
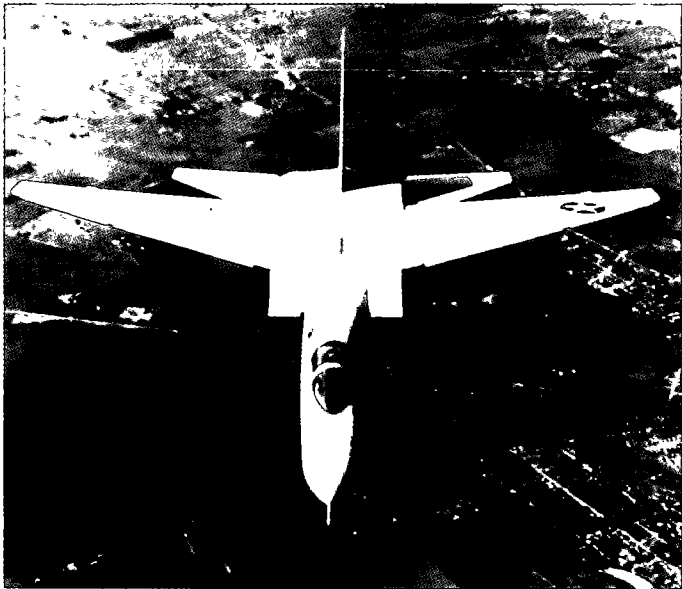
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	NORTH AMERICAN	Max. Range (Naut.Miles)	2,400 plus	No. of Engines	2 Piston 1 Jet
Wing Span	71'	Crew No.	3	Model No.	R-2800-44W J33-10
Length	64'	Max. Speed (Knots)	415 plus	Mfr.	P & W ALLISON
Combat Weight (Lbs.)	40,500 plus	Service Ceiling (Ft.)	40,000 plus	Type	Piston, Turbojet
				Rating Each	2,300 hp 4,600#

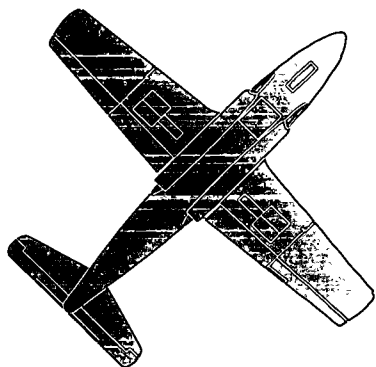
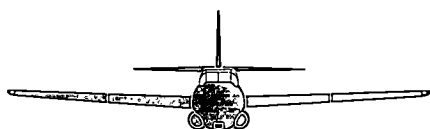
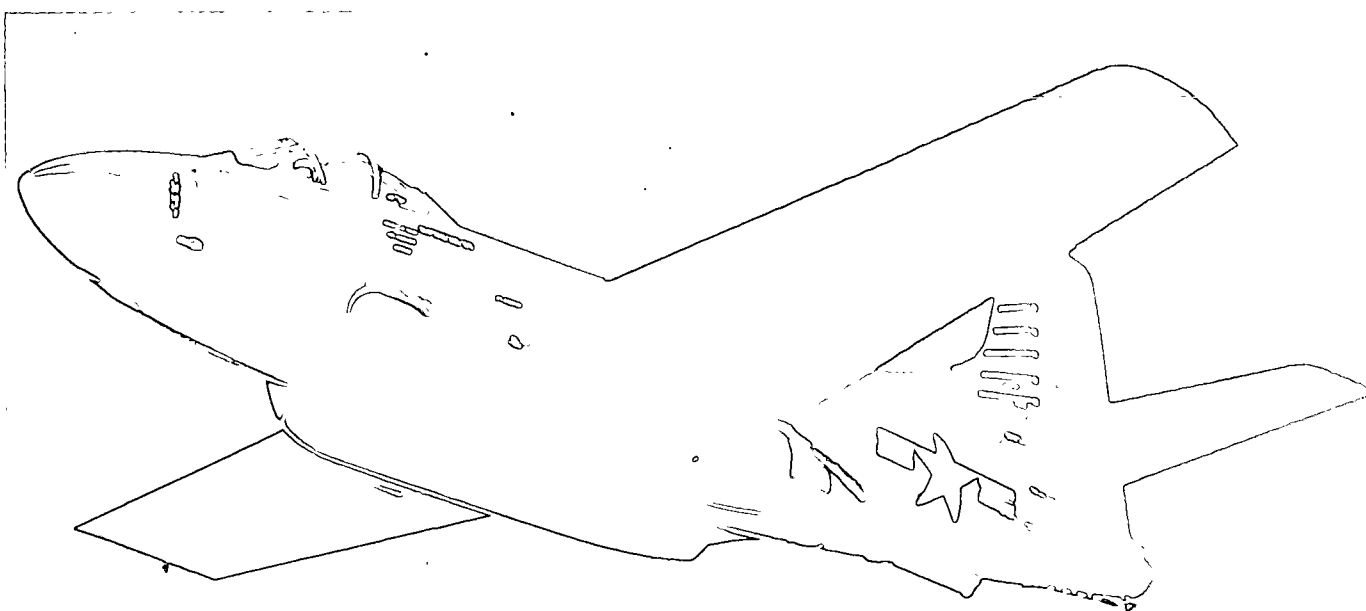




The A3J Vigilante is a two cockpit (pilot and navigator/bombardier) carrier-based subsonic or supersonic attack bomber capable of carrying nuclear or conventional weapons in all weather and at low or high altitudes. It has a Mach 2.0+ performance capability as well as a low-speed target loiter capability. Its linear bomb-bay, an axial tunnel through which stores are ejected in a rearward direction, can accommodate virtually every type of naval store. The first A3J flew in August of 1958. It is powered by two General Electric J79-GE4 single-shaft turbojet engines. Equipment includes a completely integrated inertial doppler/radar navigation and bombing system. Quite obvious recognition characteristics include a thin, high-mounted swept wing, and all movable slab type tail surfaces with spoiler deflectors in lieu of conventional ailerons for lateral control. The wing equipped with drooping leading edge and flaps which, when used in conjunction with spoiler-deflectors, provide low-speed flight characteristics. The long, pointed nose, with tandem cockpits well forward, is set between two square-formed jet-engine intakes, which from head-on give a box-like effect.

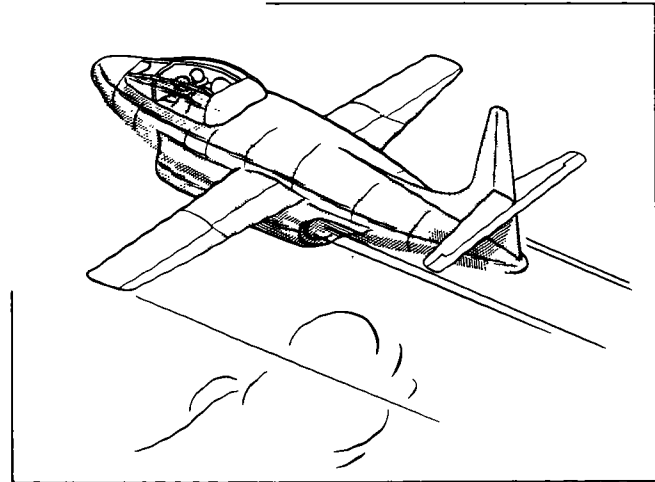
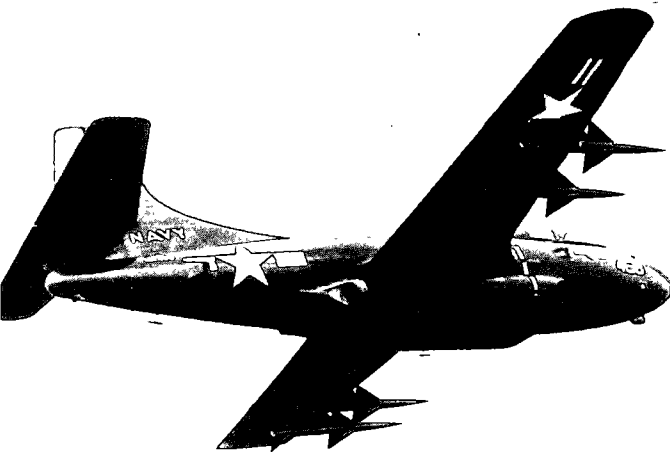
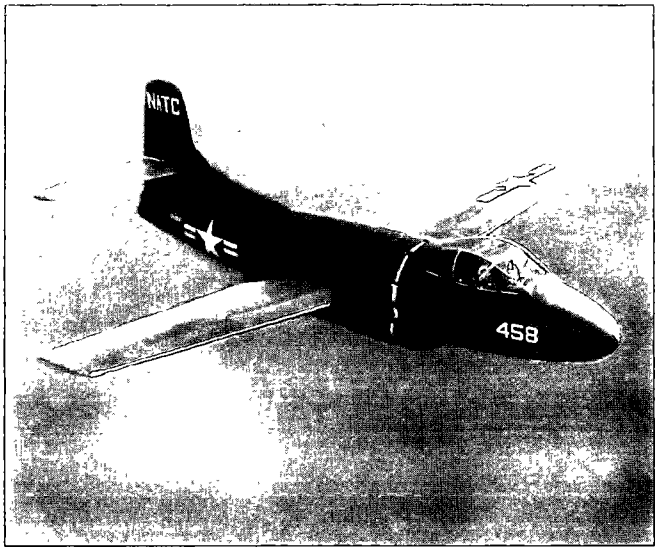
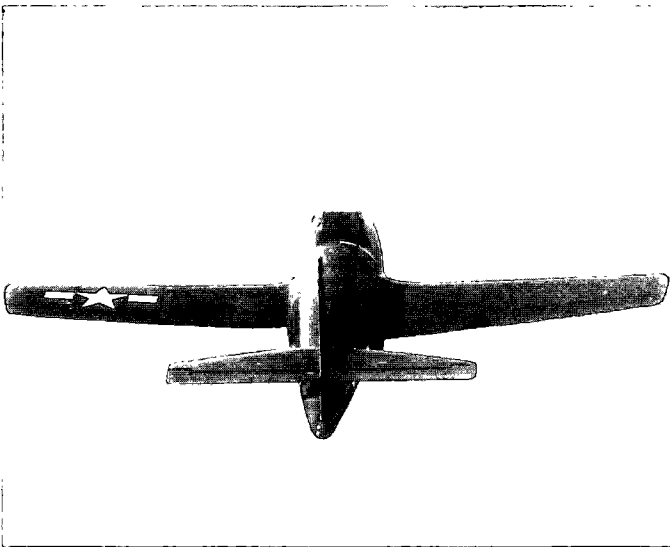
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	NORTH AMERICAN	Max Range (Naut. Miles)	1,000 plus	No. of Engines	2
Wing Span	53'	Crew No.	2	Model No.	J79-GE-4
Length	72'5"	Max. Speed (Knots)	Mach 2.0 plus	Mfr.	GE
Combat Weight (Lbs.)		Service Ceiling (Ft.)	70,000 plus	Type	Turbojet
				Rating Each	15,000#

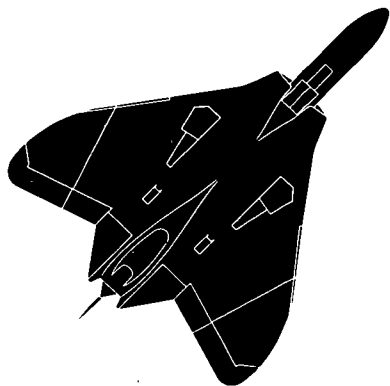
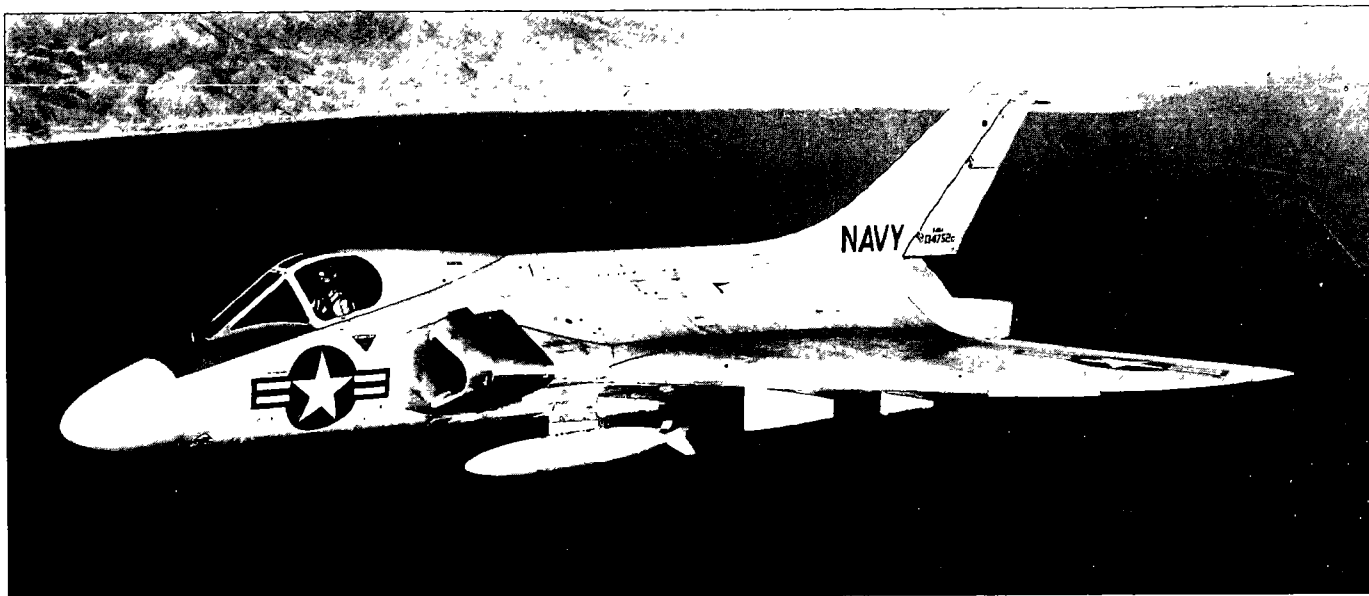




The Skynight is a straight, midwing fighter designed to operate from land bases or from aircraft carriers with the aid of a catapult. Its principal mission is to search out and destroy enemy aircraft in all weather conditions, night or day. The power plant consists of two jet engines mounted semiexternally on either side of the lower fuselage. A large, pressurized cockpit is located forward on the fuselage, with the pilot and radar operator seated side by side. The cockpit has a flat, armored windscreen, an armored canopy roof, and bulged sides. Pilot emergency escape provisions are furnished both through the power-operated escape hatch and through a special high-speed bail-out chute on the bottom of the fuselage. Speed brakes are attached just forward of the tail. Armament capabilities of the F3D include 20-mm cannon, bombs, and rockets.

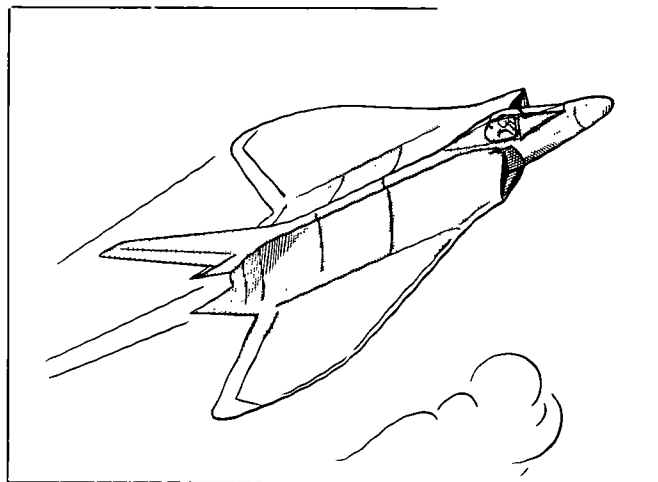
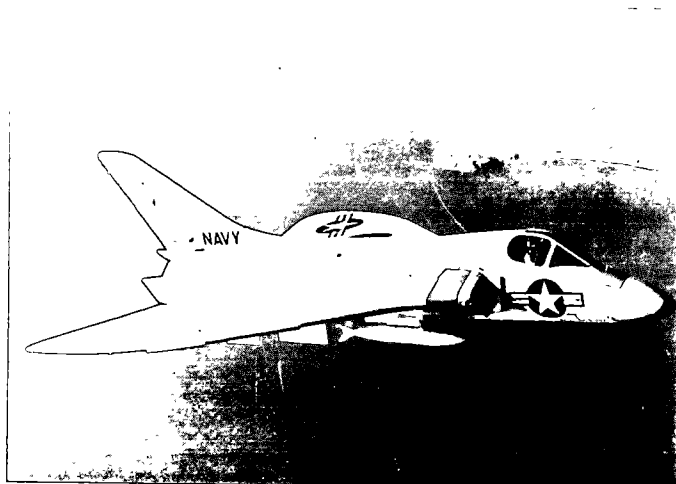
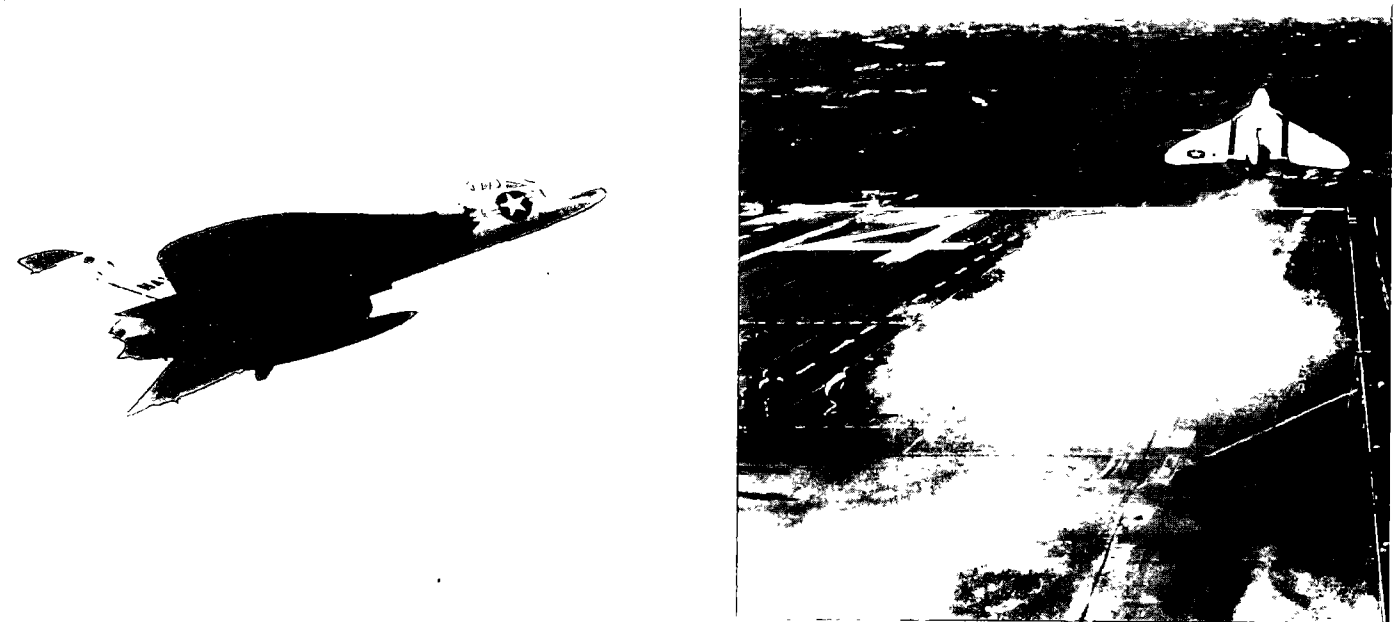
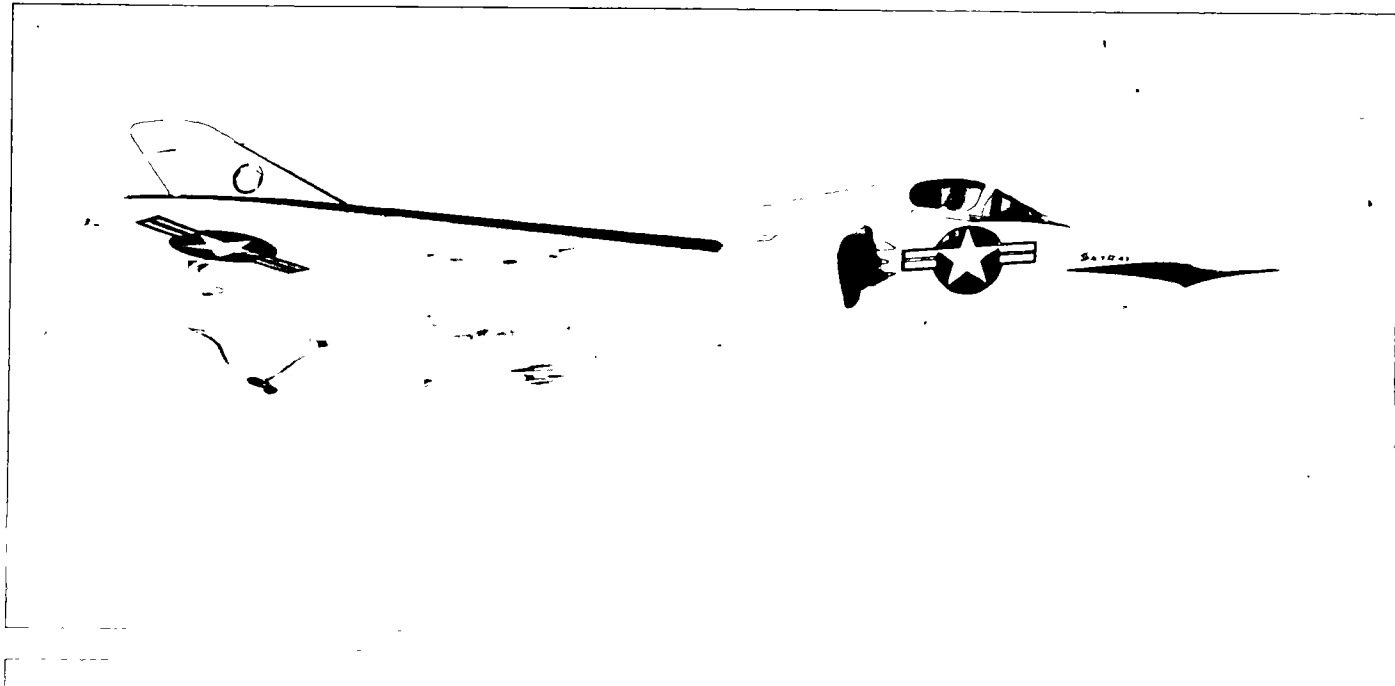
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DOUGLAS	Max. Range (Naut. Miles)	1,200 plus	No. of Engines	2
Wing Span	50'	Crew No.	2	Model No.	J34-WE-36
Length	45'5"	Max. Speed (Knots)	460	Mfr.	WESTINGHOUSE
Combat Weight (Lbs.)	21,000 plus	Service Ceiling (Ft.)	36,000 plus	Type	Turbojet
				Rating Each	3,400 #

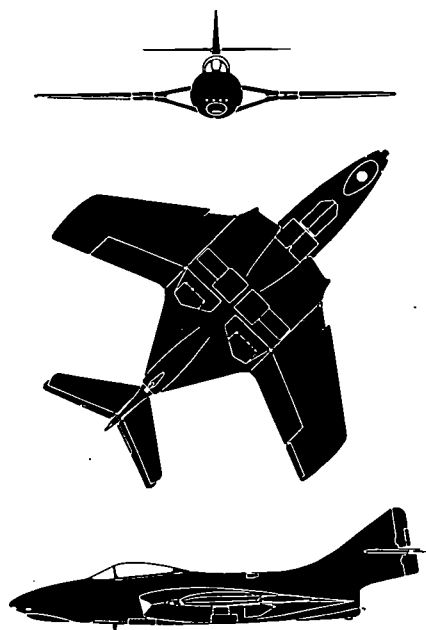




The F4D Skyray is a tailless single-seat carrier jet fighter whose primary mission is the interception and destruction of enemy aircraft. Although it is not a delta-wing aircraft, its "manta-ray-like" wing causes it to resemble one in certain attitudes. Flight control of the Skyray is provided by power-operated elevons, which perform the functions of elevators and ailerons. The Skyray lays claim to two "firsts" in naval aviation: it was the Navy's first carrier aircraft capable of supersonic speeds in level flight, and the first carrier aircraft to set an international speed record. The armament capabilities of the Skyray include rockets, bombs, and cannon.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DOUGLAS	Max. Range (Naut. Miles)	1,000 plus	No. of Engines	1
Wing Span	33'6"	Crew No.	1	Model No.	J57-P-8
Length	45'	Max. Speed (Knots)	620 plus	Mfr.	P & W
Combat Weight (Lbs.)	21,000 plus	Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	11,000# plus 4,000# A.B.

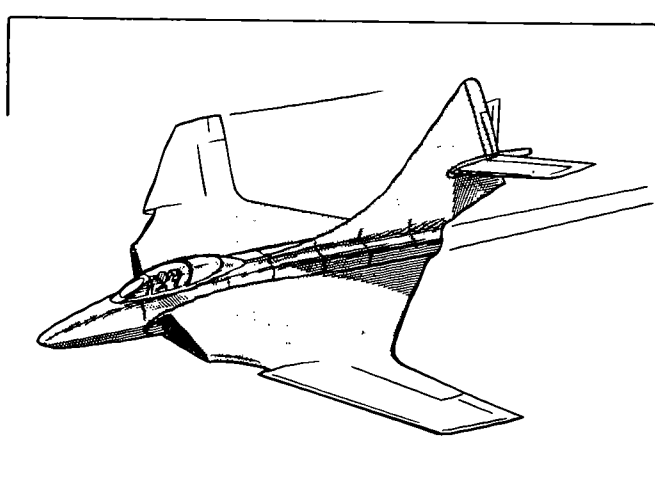
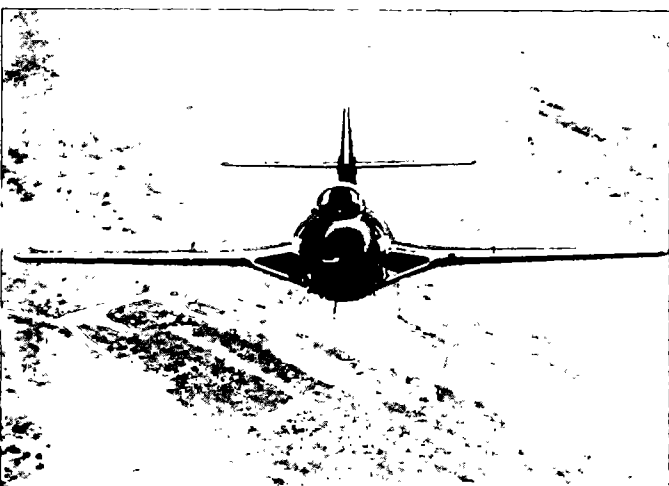
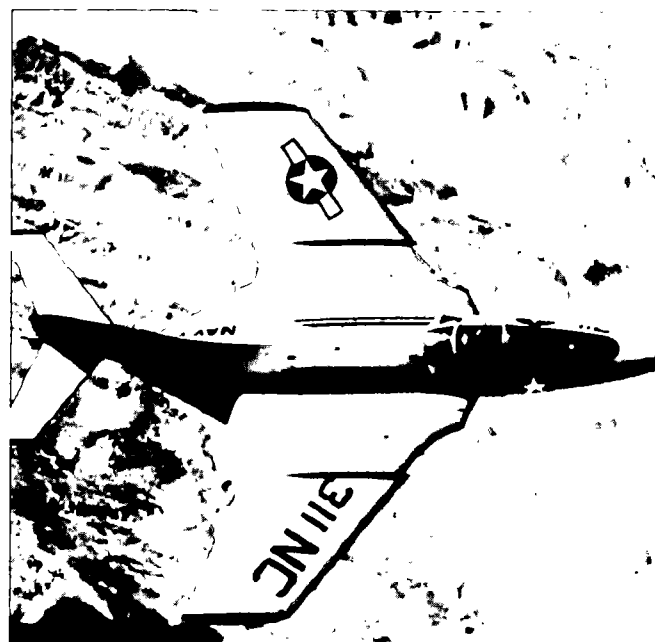
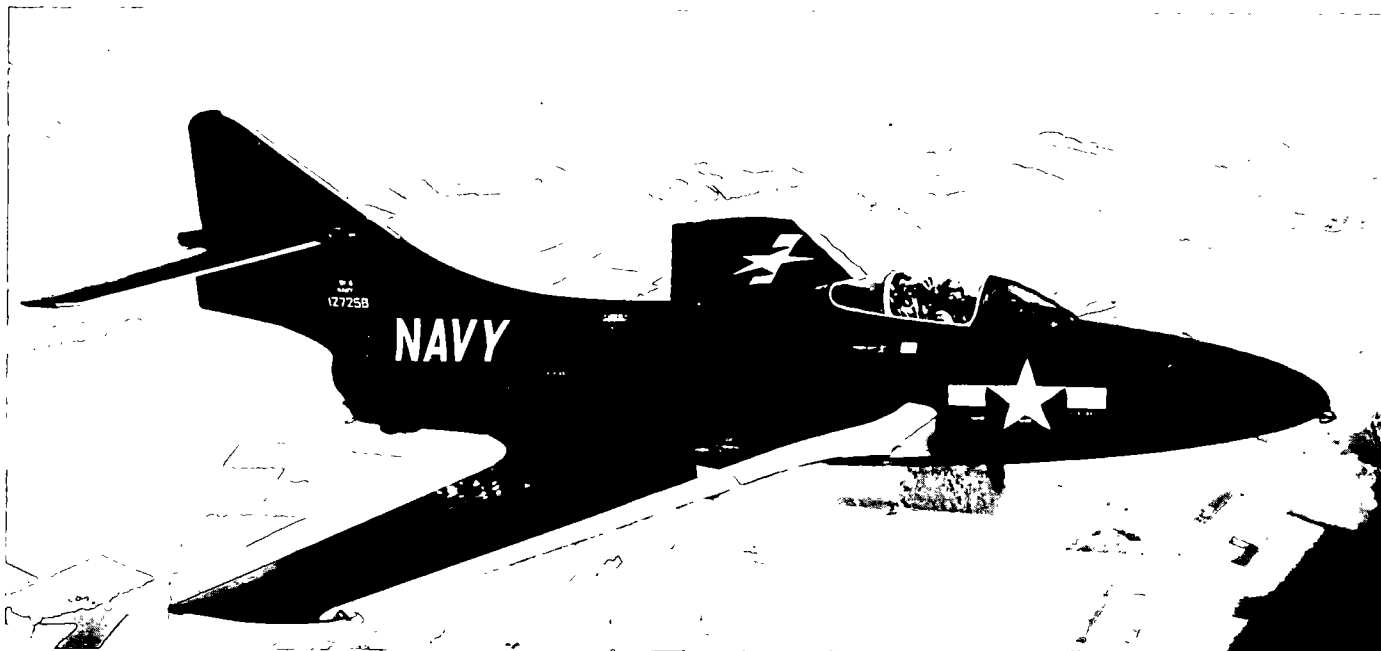


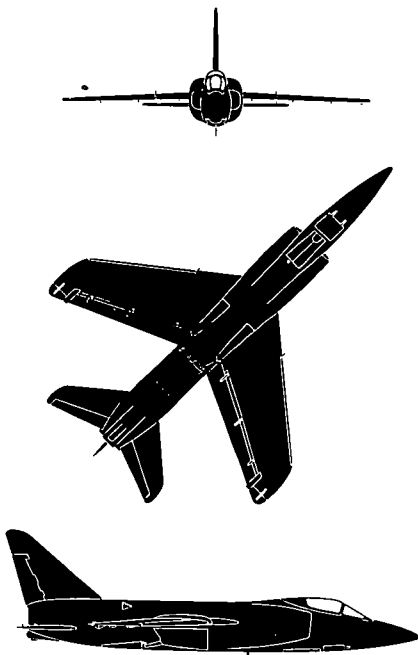
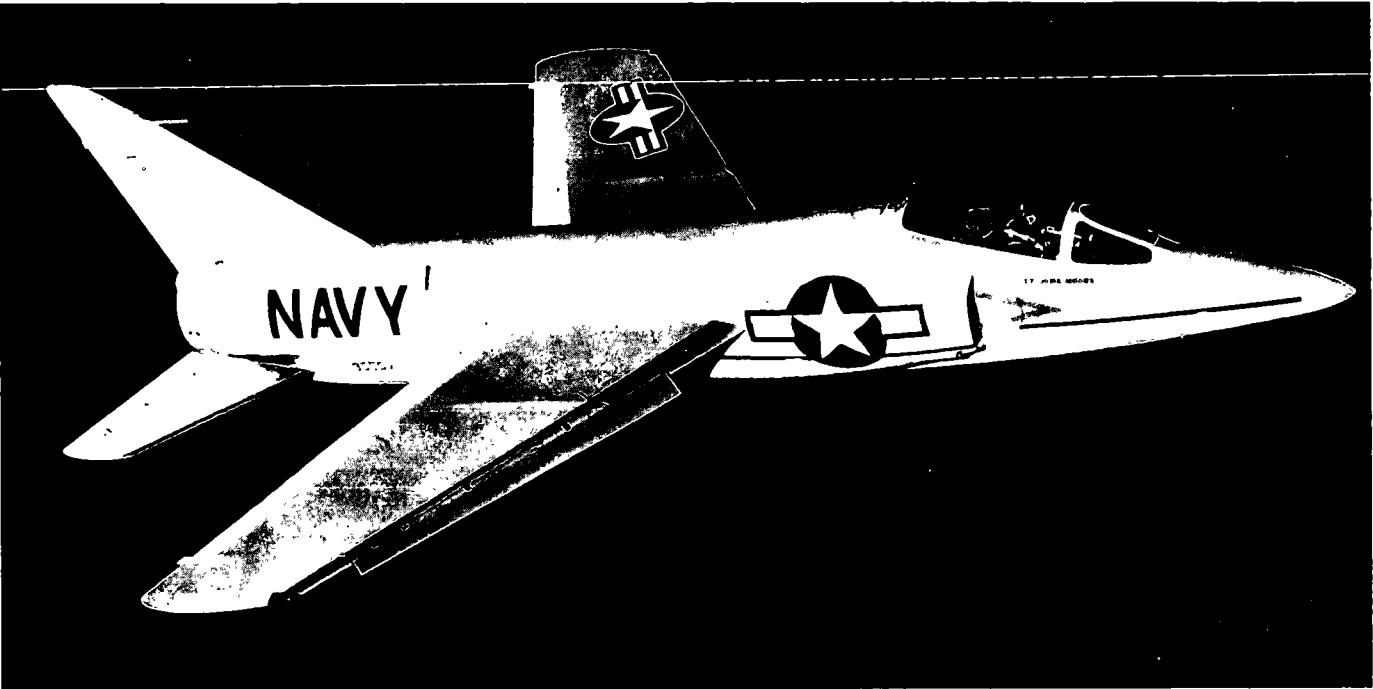


The F9F-6 through-8 Cougar is a sweptwing development of the F9F Panther with all-around increased performance capabilities. Its horizontal stabilizer is swept back and the jet duct entrances have been modified. The over-all appearance of the Cougar features the broad center-section wing, with its giant fillets. The latest version of the Cougar, the F9F-8, has greater speed and range than do the -6 and -7. It was the first sweptwing jet fighter to enter operational service with carrier squadrons and saw extensive service with the Navy's precision flight demonstration team, the Blue Angels. The F9F-8P is a photographic reconnaissance version of the Cougar with a lengthened forward fuselage. It can fly nonstop across the United States in less than 4 hours, and can photograph a 10-mile-wide strip of the terrain below. The F9F-8T is a 2-seat fighter-trainer version of the Cougar.

DATA APPLY TO F9F-8

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	GRUMMAN	Max. Range (Naut. Miles)	1,100 plus	No. of Engines	1
Wing Span	34'6"	Crew No.	1	Model No.	J48-P-8
Length	41'	Max. Speed (Knots)	575	Mfr.	P & W
Combat Weight (Lbs.)	17,000	Service Ceiling (Ft.)	42,000	Type	Turbojet
				Rating Each	7,250#

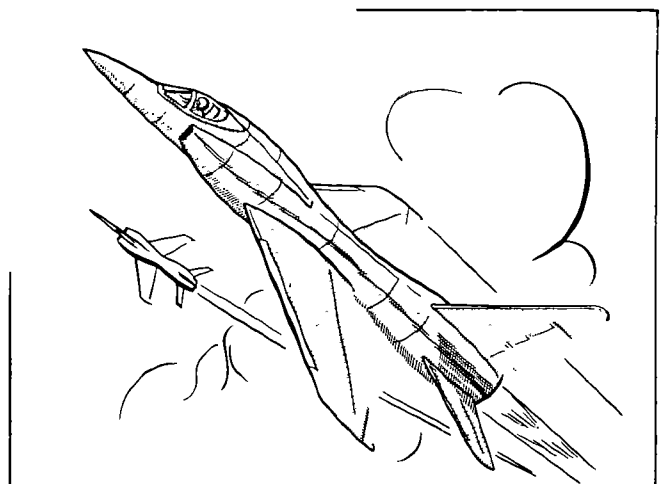
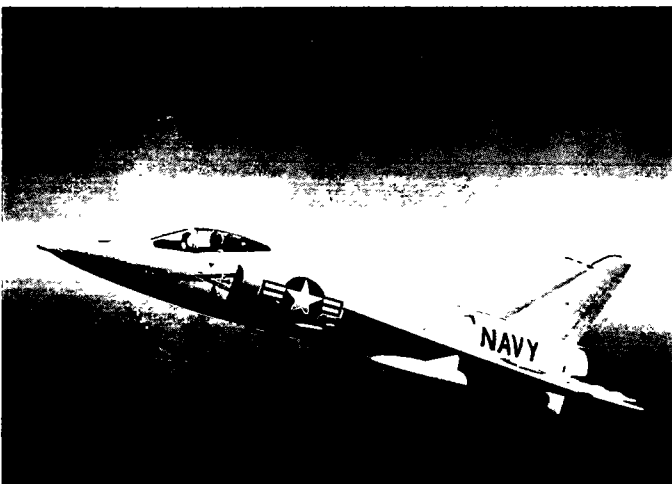
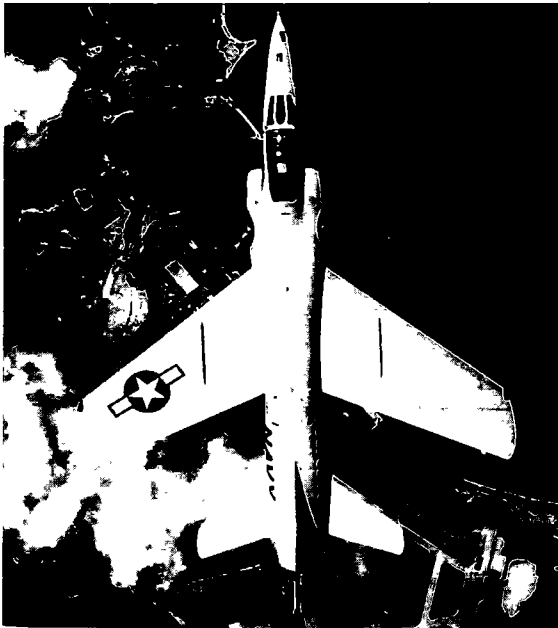




The F11F Tiger is a single-seat, midwing, supersonic fighter originally bearing the F9F designation. Since it is a completely new design, however, it was redesignated F11F. Recognition features include the low-seat, horizontal stabilizer on the lower quarter of the aft fuselage, the sharply tapered, large vertical tail that overhangs the tailpipe exhaust, and thin, sweptback wings that fold manually. The swept wings have rounded tips, distinctive droop-snoot leading edges, and abbreviated wing fences inboard of the wing tips. The Tiger's fuselage employs the area-ruled shape which is frequently described as "coke bottle" design. A modification of the Tiger, the F11F-1 Super Tiger, serves a dual role of fighter-bomber and interceptor. Although designed primarily as a carrier-based aircraft, the Super Tiger is able to operate out of small, unimproved land bases.

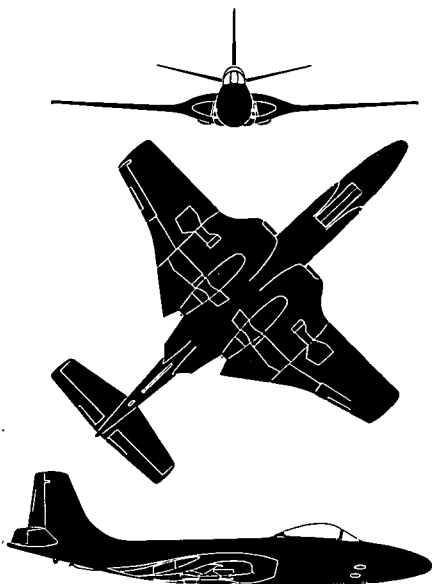
DATA APPLY TO F11F-1 TIGER

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	GRUMMAN	Max. Range (Naut.Miles)	1,100 plus	Na. of Engines	1
Wing Span	31'	Crew Na.	1	Model Na.	J65-W-6
Length	41'	Max. Speed (Knots)	635 plus	Mfr.	WRIGHT
Cambat Weight (Lbs.)	20,000 plus	Service Ceiling (Ft.)	35,000 plus	Type	Turbojet
				Rating Each	7,800# plus 3,200# A.B.





F2H-3



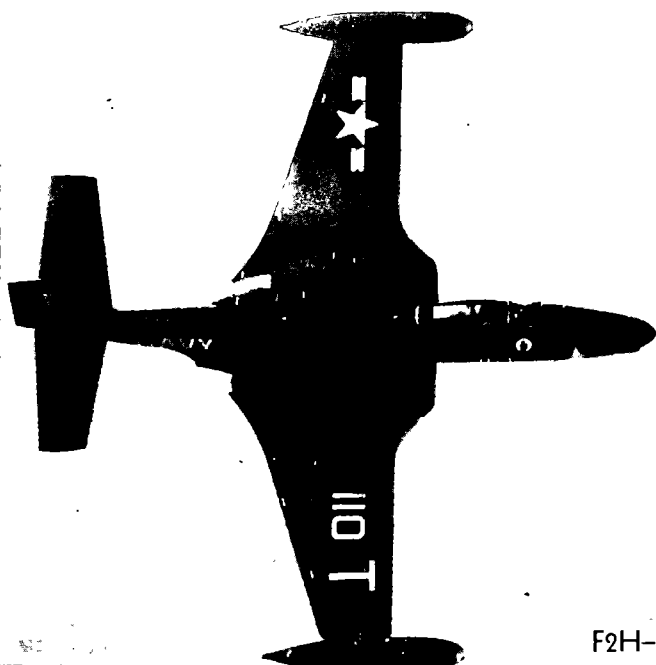
The latest versions of the F2H Banshee are the F2H-3 and F2H-4. They differ from the previous F2H's in having a longer fuselage, a forward-set vertical tailplane, and dihedral in the stabilizer. The F2H-3 is classed as a single-place, all-weather fighter designed for either land- or carrier-based operations. Its internal fuel capacity has been increased, to eliminate the use of tip tanks for carrier operations. Equipment includes automatic pilot, ejection seat, cockpit pressurization, and power actuation with artificial feel forces for the aileron and elevator. In the F2H series the jet units are placed close to the center line of the aircraft so that very little yaw results when one engine is shut off. The Banshee is in service with the U.S. Navy and Marine Corps and the Royal Canadian Navy.

DATA APPLY TO F2H-3 AND F2H-4

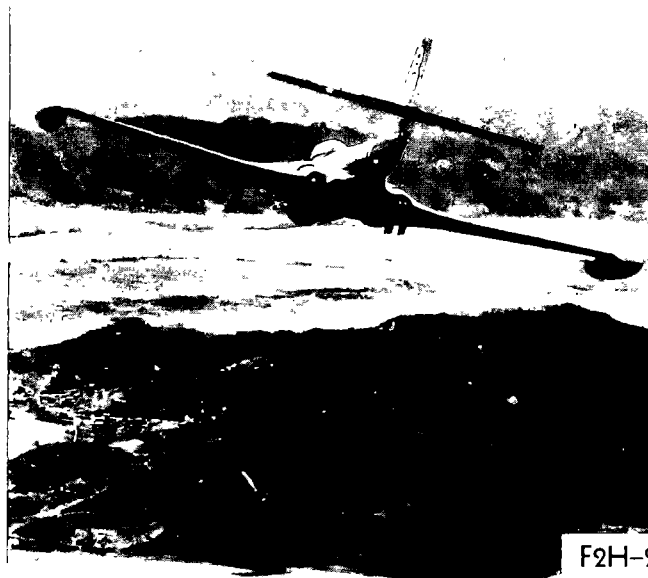
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	McDONNELL	Max. Range (Naut.Miles)	1,400 plus	No. of Engines	2
Wing Span	41'	Crew No.	1	Model No.	J34-WE-34
Length	48'	Max. Speed (Knots)	500	Mfr.	WESTINGHOUSE
Combat Weight (Lbs.)	21,000 plus	Service Ceiling (Ft.)	45,000 plus	Type	Turbojet
				Rating Each	3,250#



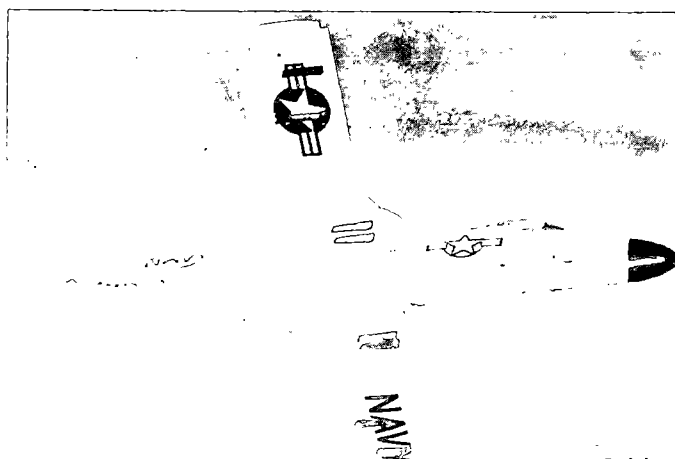
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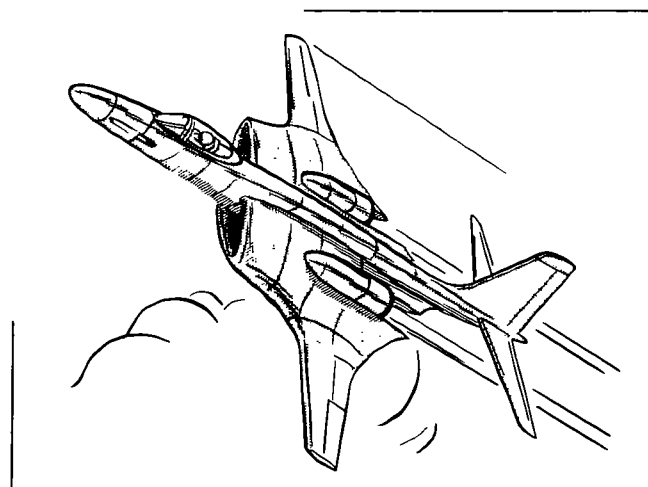
F2H-2



F2H-2



F2H-3

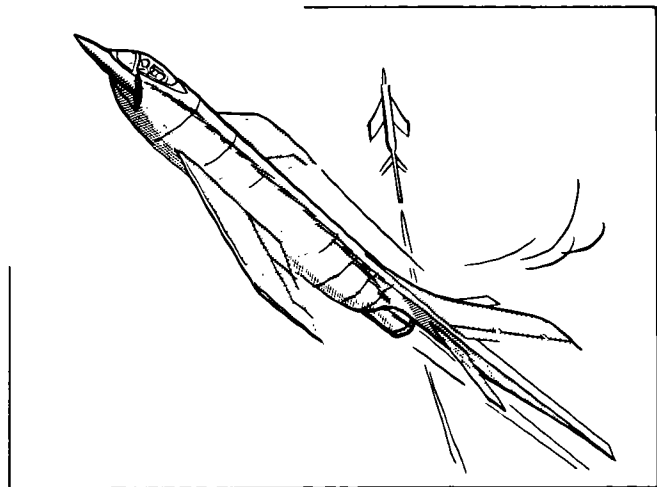
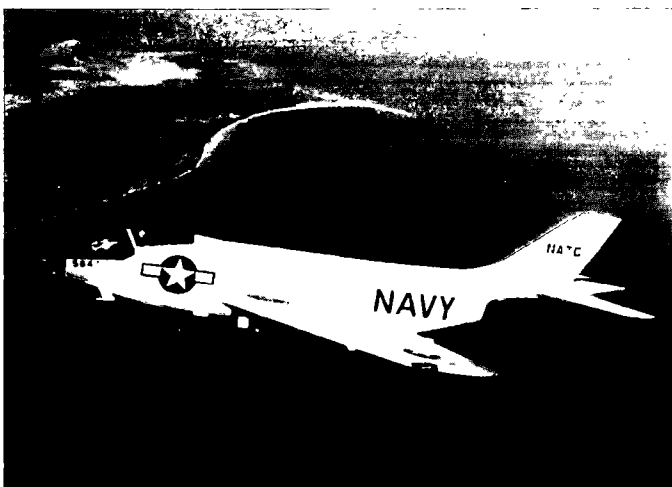
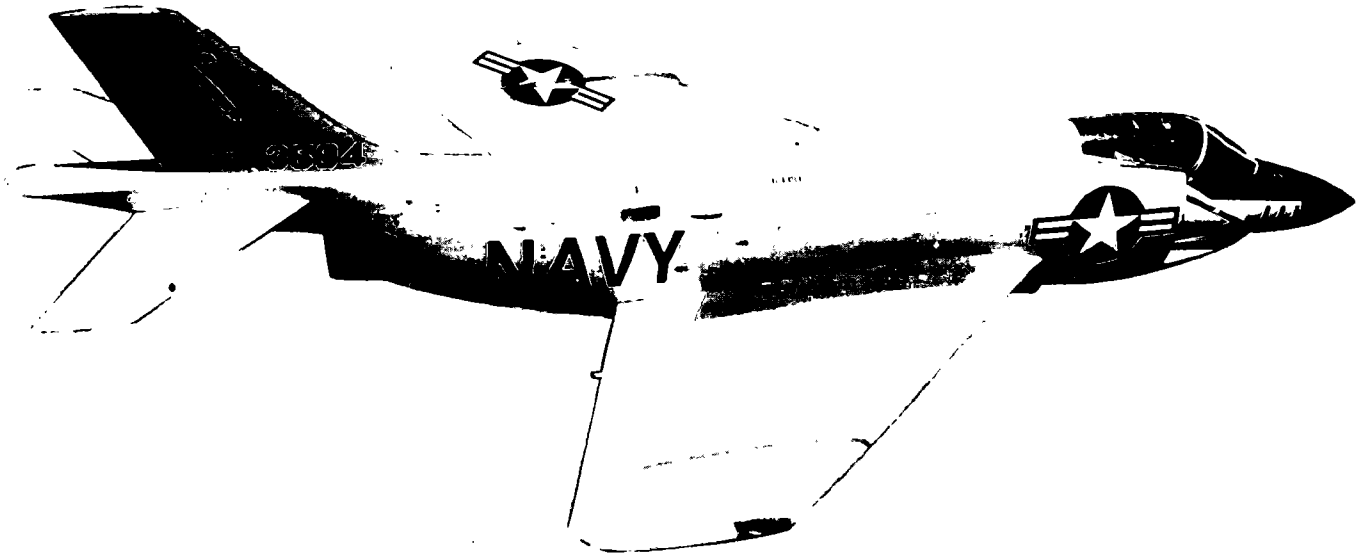


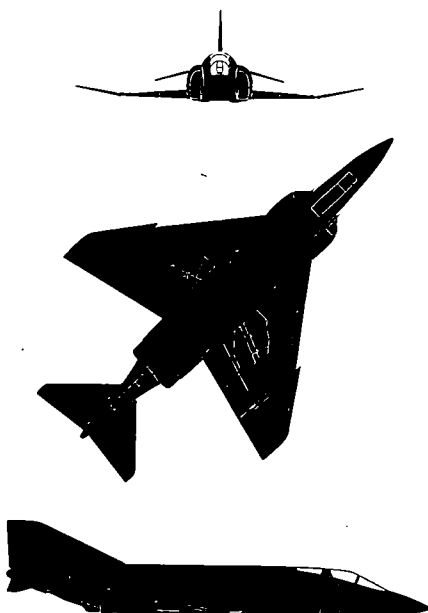
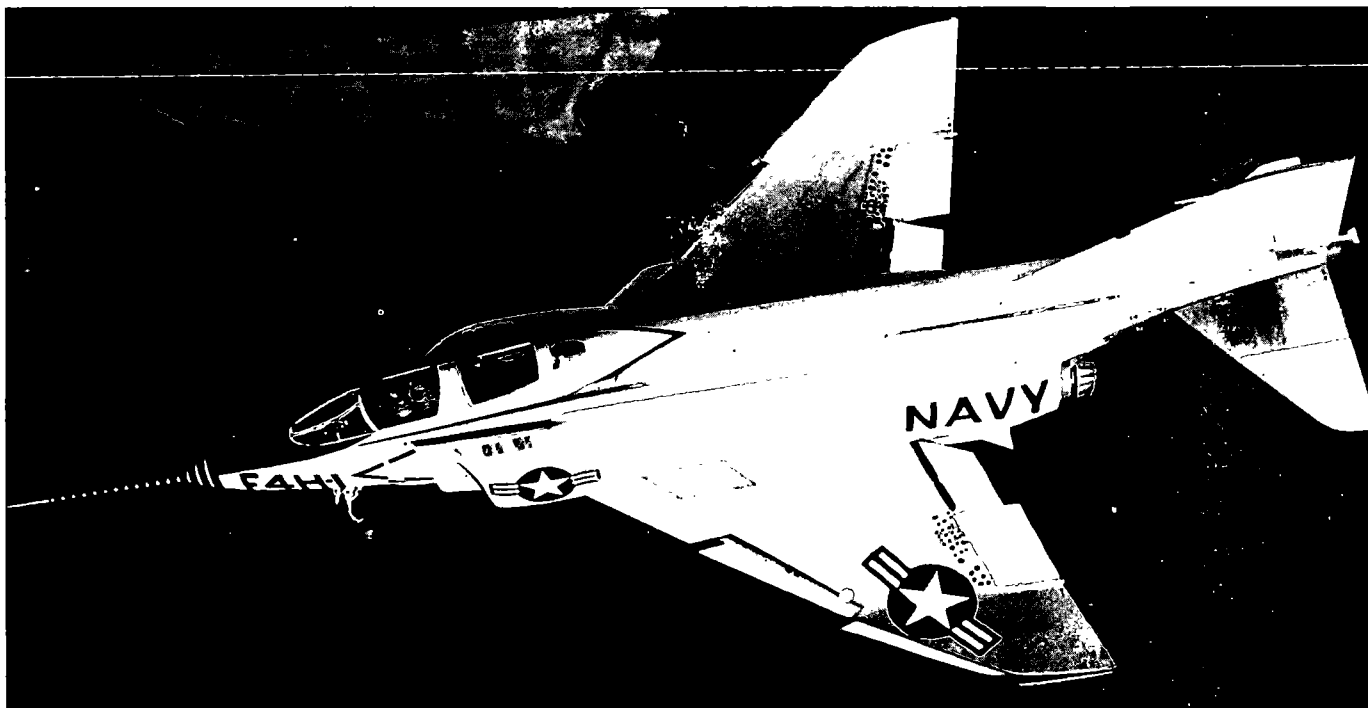


The F3H-2N Demon is a single-seat carrier-based all-weather fighter which combines interceptor speeds and fighter maneuverability with the pay-load capacity of an attack bomber. Recognition features include 45° swept-wing and -tail surfaces; wing leading-edge slats and trailing-edge slotted flaps; and a sharp, forward slanting, short fuselage nose. The horizontal stabilizer is movable and can be reset for various speeds. In overall appearance the Demon resembles a needle-nosed projectile with an undercut tail section trailing far aft. Other modifications of the Demon are the F3H-2M day fighter and missile carrier, and the F3H-2P photo-reconnaissance version. Their recognition features are similar to those of the F3H-2N. Each of the three versions of the Demon carries cannon, rockets, and Sidewinder missiles.

DATA APPLY TO F3H-2N

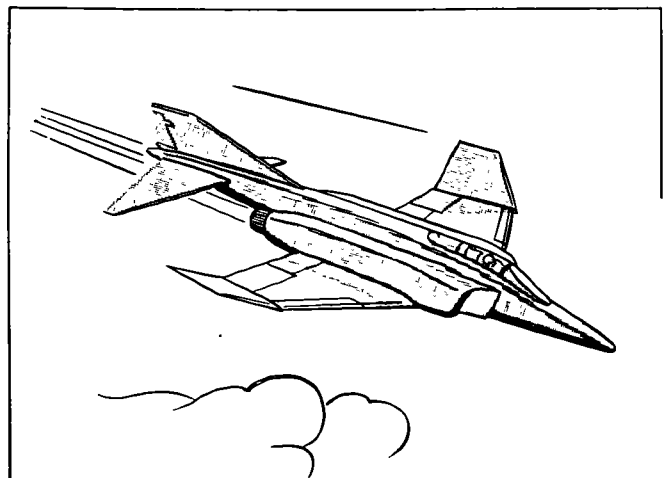
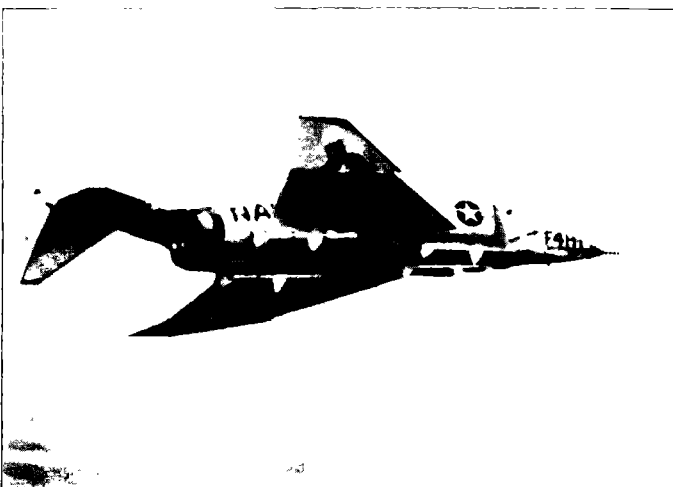
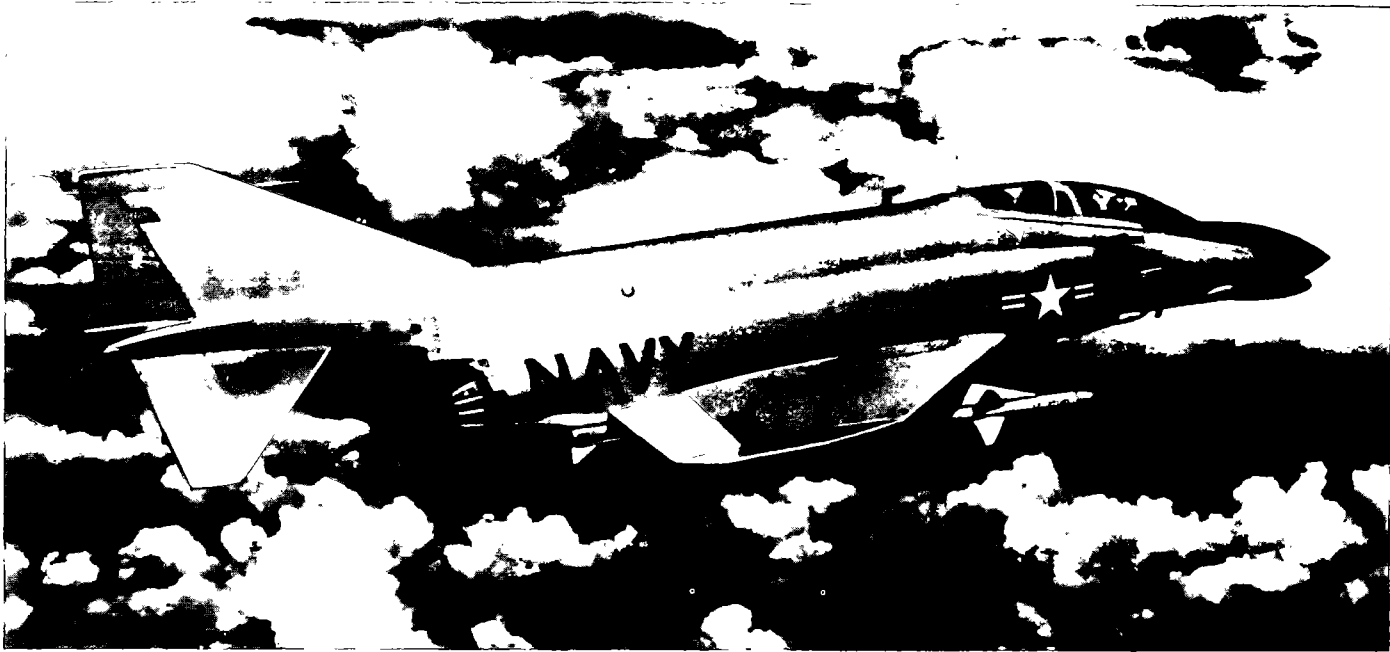
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	McDONNELL	Max. Range (Naut. Miles)	1,000 approx.	No. of Engines	1
Wing Span	35'4"	Crew No.	1	Model No.	J71-A-2
Length	59'	Max. Speed (Knots)	575 plus	Mfr.	ALLISON
Combat Weight (Lbs.)	27,500 plus	Service Ceiling (Ft.)	45,000 plus	Type	Turbojet
				Rating Each	10,000# plus 4,000# A.B.





The Mach 2 F4H is intended as a successor to the F3H Demon. It is a twin-engined, all-weather, fighter-attack bomber powered by General Electric J79 engines. The low-mounted wing is sweptback at 45° with positive dihedral in the outer sections. The horizontal stabilizer is mounted on the fuselage and has 23° of negative dihedral. The cockpit is located well forward on the fuselage near the forward-slanting, pointed nose. The fuselage thickens through the engine area, then thins and tapers upward to a rounded tail cone. Normal armament of the F4H consists of four Sparrow III missiles on semisubmerged mountings under the fuselage.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	McDONNELL	Max. Range (Naut. Miles)	1,500 plus	No. of Engines	2
Wing Span	38'5"	Crew No.	2	Model No.	J79-GE-2
Length	56'	Max. Speed (Knots)	Mach 2	Mfr.	GE
Combat Weight (Lbs.)	40,000 approx.	Service Ceiling (Ft.)	43,000 plus	Type	Turbojet
				Rating Each	14,000# plus





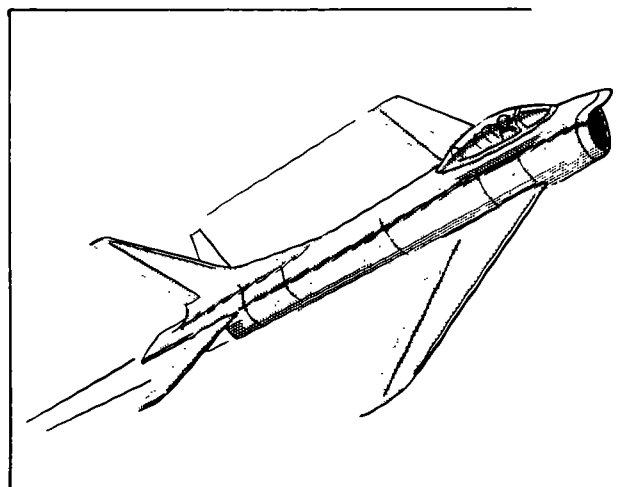
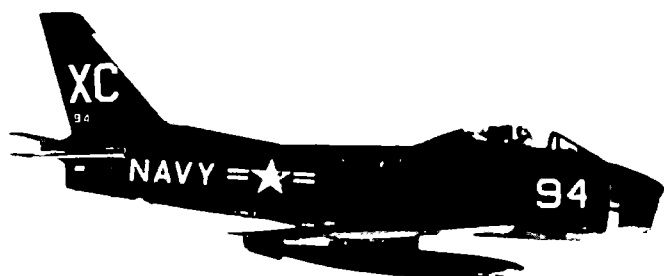
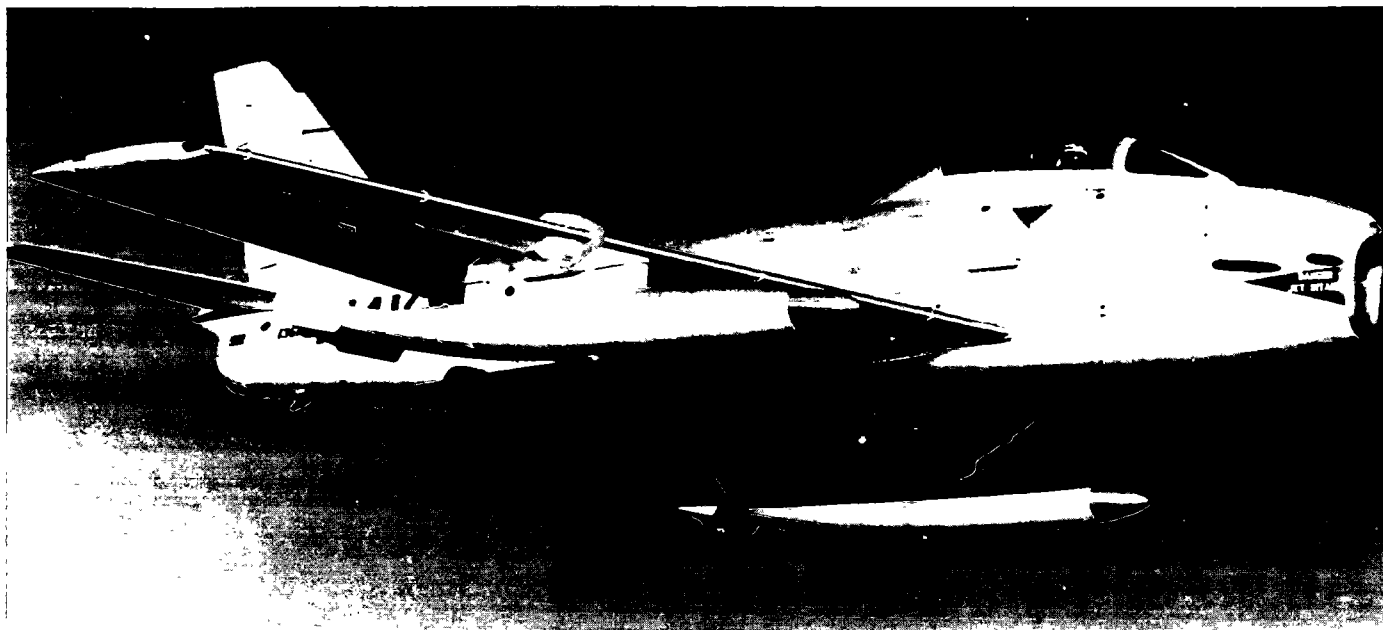
The FJ-2 Fury is a navalized F-86 Sabre with many engineering changes inside its fuselage. Actually, the sweptwing Sabre is an outgrowth of aeronautical findings in the earlier straight-wing FJ-1 Fury, the Navy's first operational jet fighter. The FJ-2 has a tri-cycle landing gear, but does not have the kneeling-nose wheel mechanism of the straight-wing FJ-1. In addition, the cockpit is an entirely new design covered with a new sliding, jettisonable canopy. An improved Navy gunsight, 20-mm cannons, folding wings, and new homing radio equipment are included in the fighter's design changes. The later FJ-3, powered by a J-65 Sapphire engine, is a faster, larger, and slightly heavier version of the FJ-2. A standard production FJ-3 has reportedly climbed to 10,000 ft from a standing start in 83 seconds.

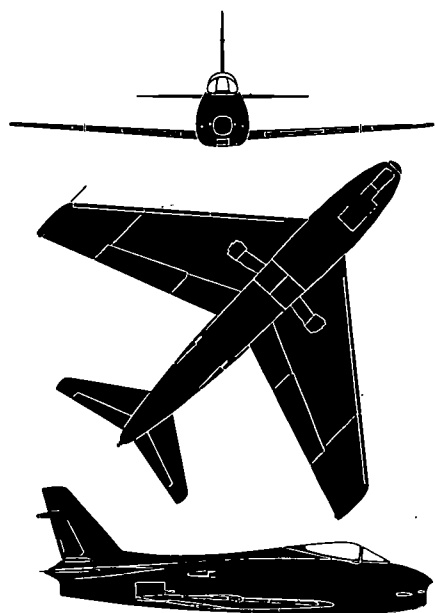
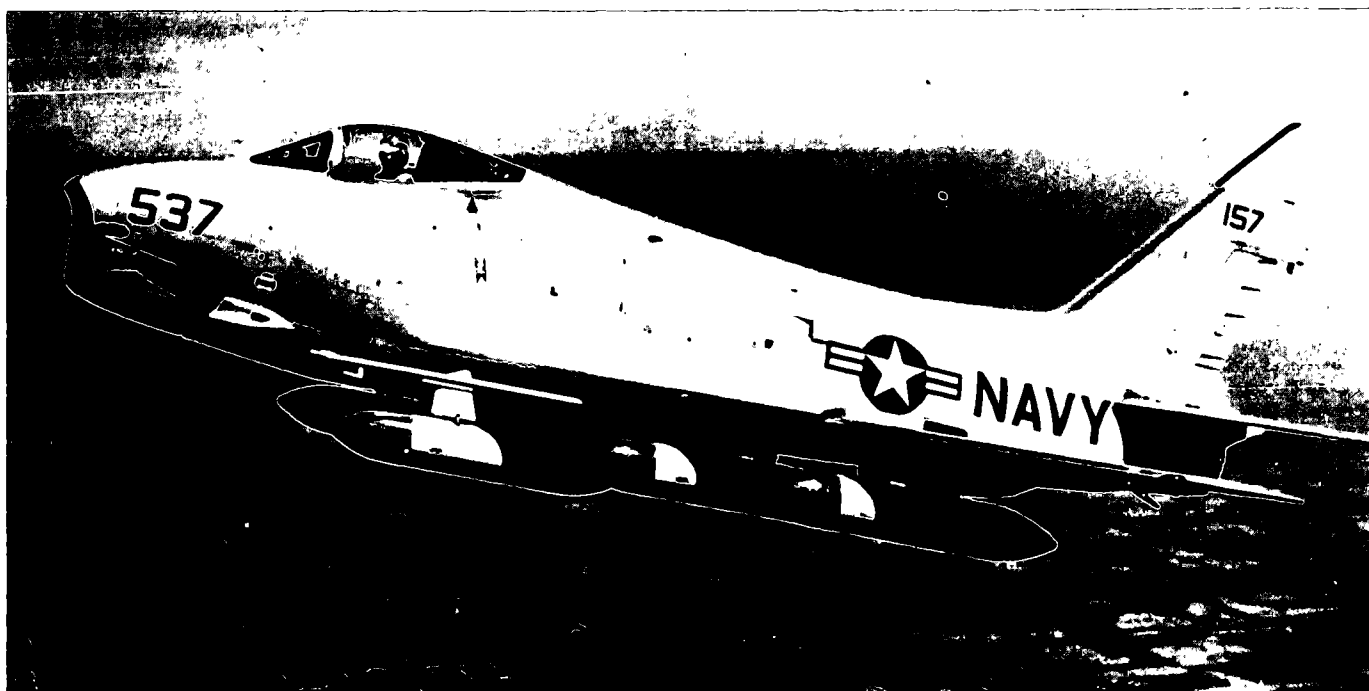
DATA APPLY TO FJ-3

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	NORTH AMERICAN	Max. Range (Naut. Miles)	1,500 plus	No. of Engines	1
Wing Span	37'1"	Crew No.	1	Model No.	J65-2 (FJ-3)
Length	37'6"	Max. Speed (Knots)	590 plus	Mfr.	WRIGHT
Combat Weight (Lbs.)	18,000 plus	Service Ceiling (Ft.)	45,000 plus	Type	Turbojet
				Rating Each	7,200#

FJ-2, 3 FURY

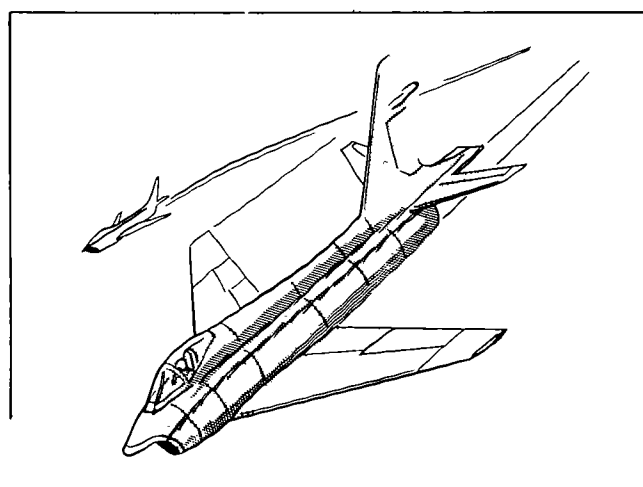
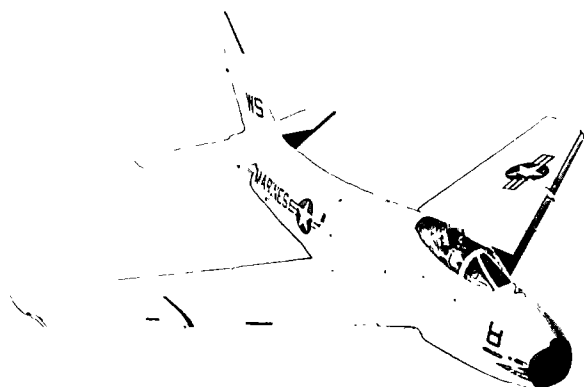
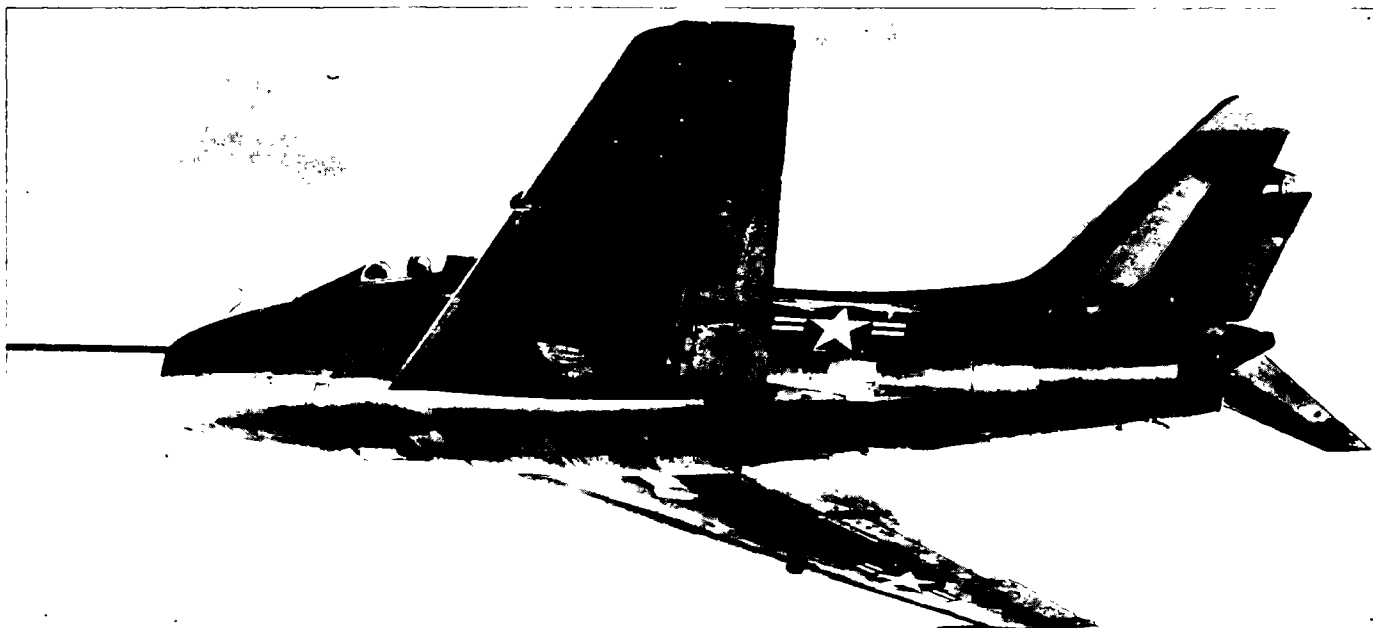
NORTH AMERICAN

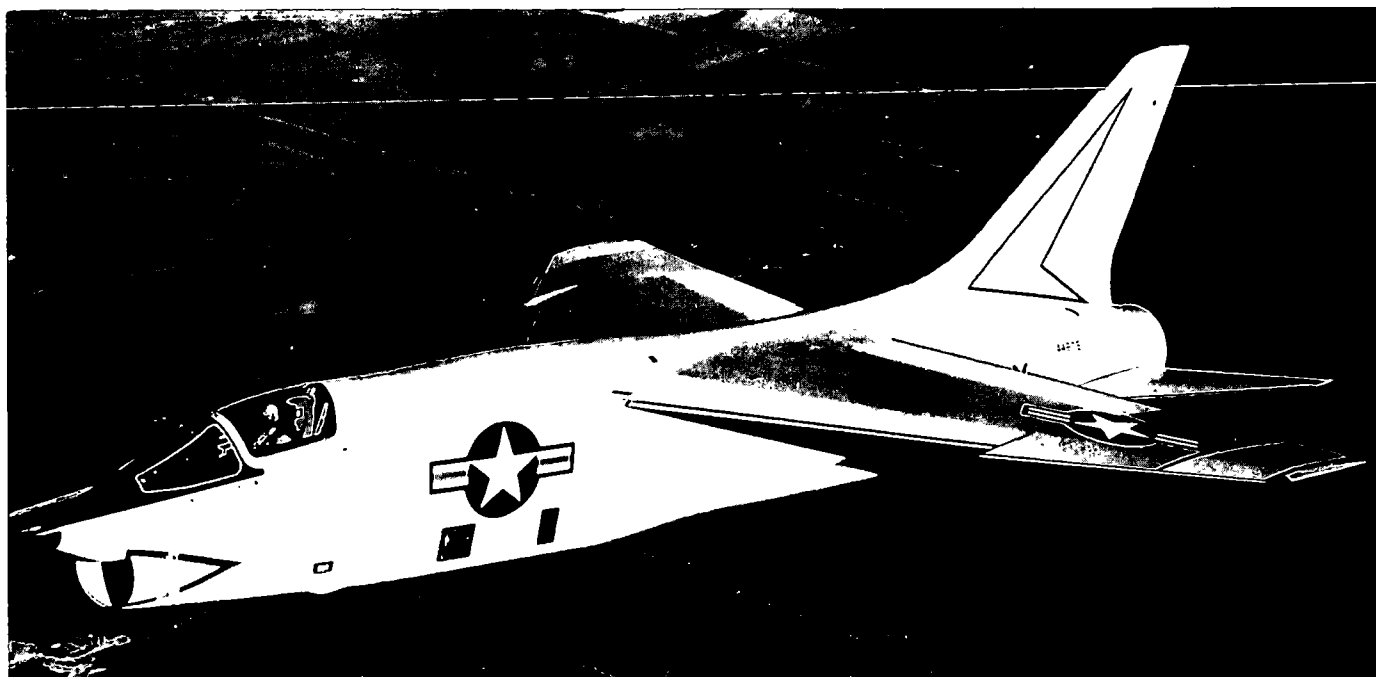




The FJ-4 Fury is an improved version of the FJ-3. From a recognition standpoint the principal differences between it and the FJ-3 are its thin wings and a dorsal spine between the cockpit and fin. The FJ-4 is capable of carrying equipment for refueling, or being refueled by, another FJ-4 in flight. When not in use this equipment retracts into a pod beneath the wing. Flight tests of the FJ-4 have been conducted using an auxiliary rocket motor to increase its operational ceiling. A fighter-bomber version of the FJ-4, the FJ-4B, was designed for attack operations. It is capable of combat at near sonic speeds, and utilizes a low-altitude bombing system. In addition to four 20-mm cannons, the FJ-4B is capable of carrying Sidewinder missiles and conventional bombs and rockets, as well as atomic weapons.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	NORTH AMERICAN	Max. Range (Naut. Miles)	1,700 plus	No. of Engines	1
Wing Span	39'	Crew No.	1	Model No.	J65-W-16A
Length	36'	Max. Speed (Knots)	590 plus	Mfr.	WRIGHT
Combat Weight (Lbs.)	20,000 plus	Service Ceiling (Ft.)	43,000 plus	Type	Turbojet
				Rating Each	7,700#

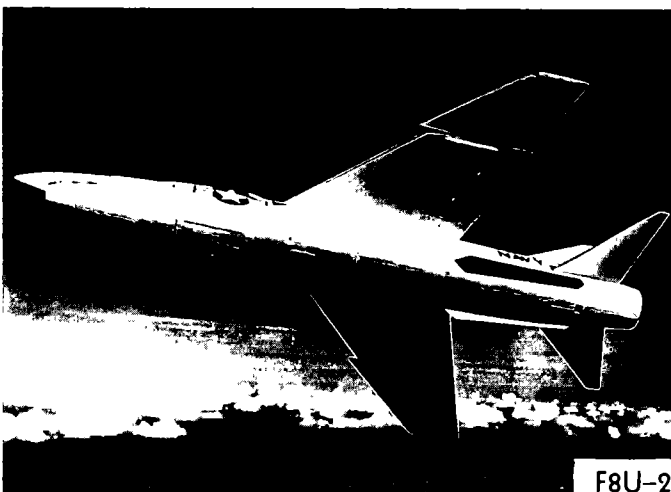
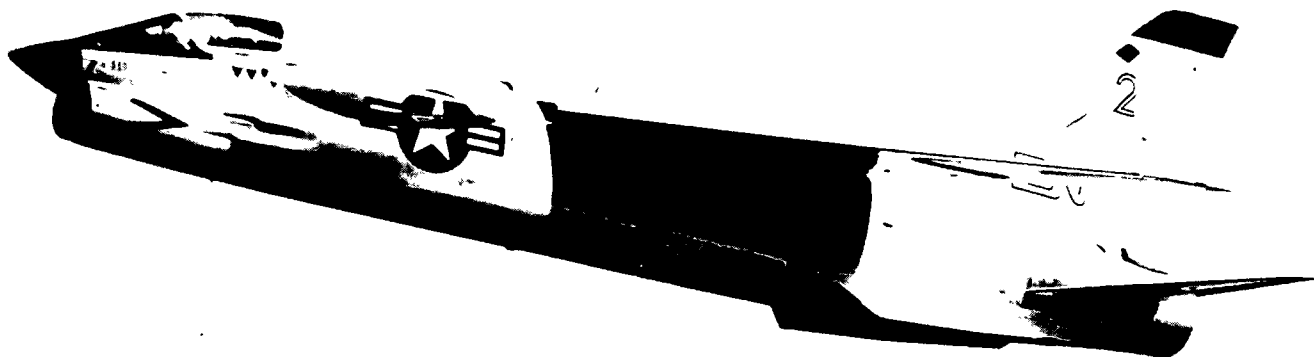
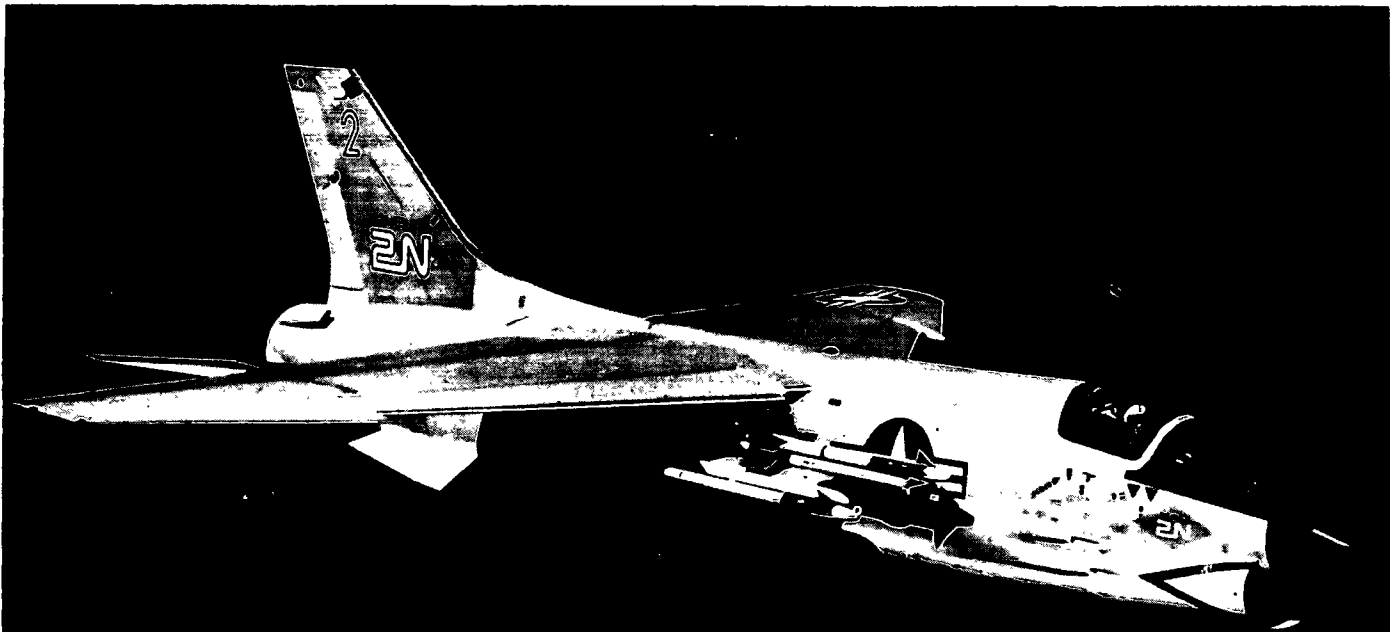




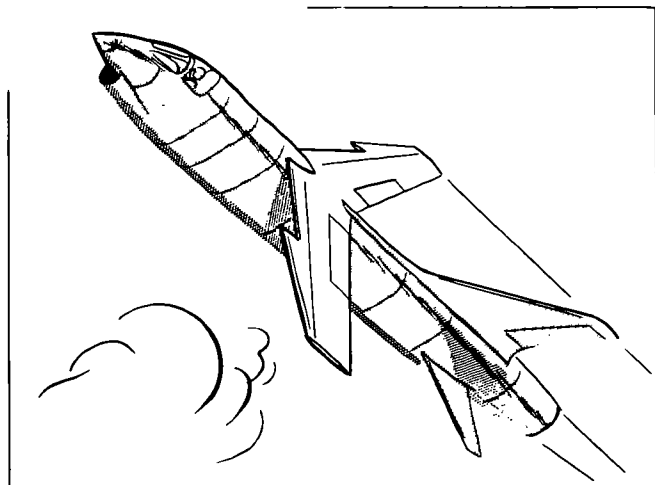
The F8U Crusader is a single-seat supersonic sweptwing fighter designed for carrier use. The variable-incidence wing, whose angle is changed for take-offs and landings, is set high and well back on the fuselage. The horizontal tailplane, which is a small replica of the wing, is mounted well down on the fuselage tail. When viewed from the front or rear the dihedral of the horizontal tailplane contrasts with the cathedral of the wings, and together they form a good recognition feature. On August 21, 1956, an F8U set an American speed record of 1,015.428 m.p.h. A photo-reconnaissance version of the F8U set a U.S. transcontinental record on July 16, 1957, by flying from Los Angeles to New York in 3 hr 23 min 8.4 sec, for an average speed of 732.52 m.p.h. A newer, more powerful version of the Crusader, the F8U-2, has been developed. It resembles the F8U-1 except for the addition of two ventral fins mounted under the tail section and two afterburner air scoops on the tail cone.

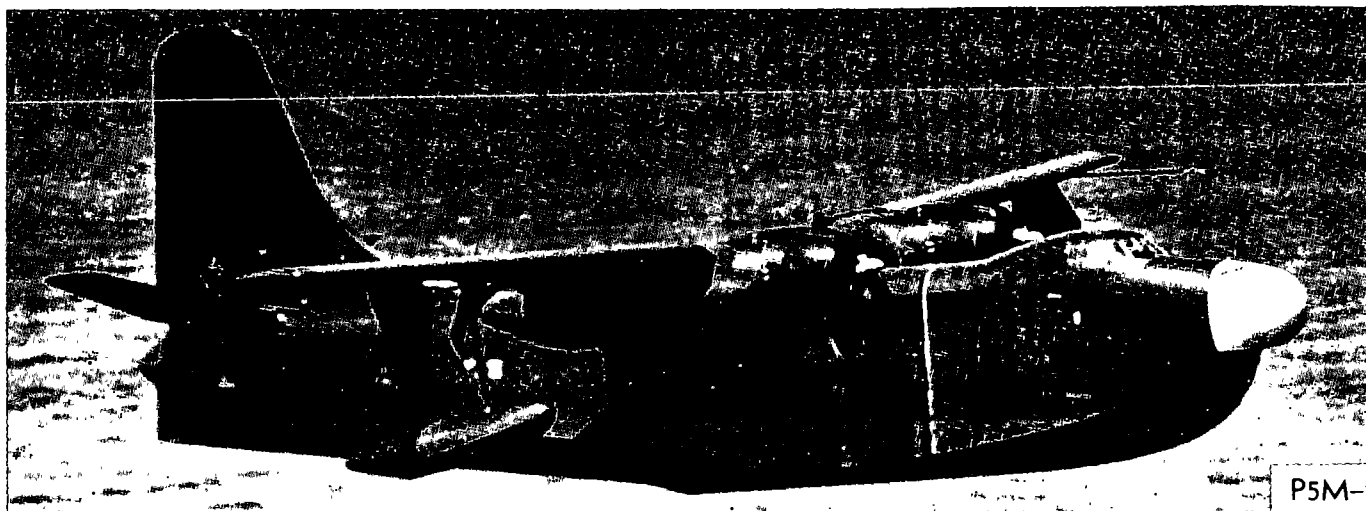
DATA APPLY TO F8U-1

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	CHANCE VOUGHT	Max. Range (Naut. Miles)	1,200 plus	No. of Engines	1
Wing Span	35'8"	Crew No.	1	Model No.	J57-P-4
Length	54'3"	Max. Speed (Knots)	875 plus	Mfr.	P & W
Combat Weight (Lbs.)	23,500 plus	Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	11,000# plus 5,000# A.B.

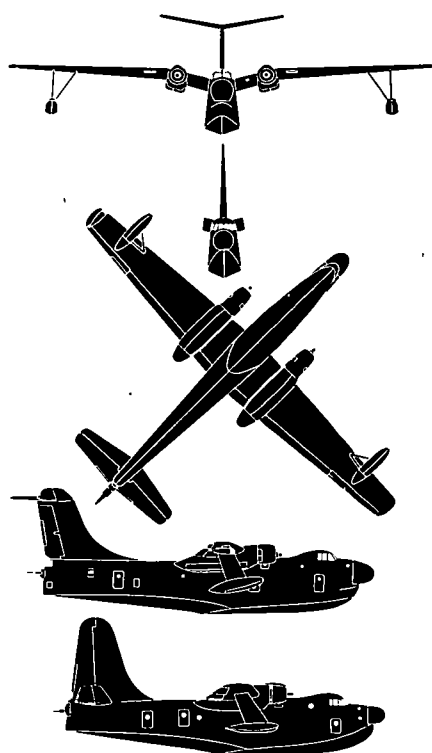


F8U-2





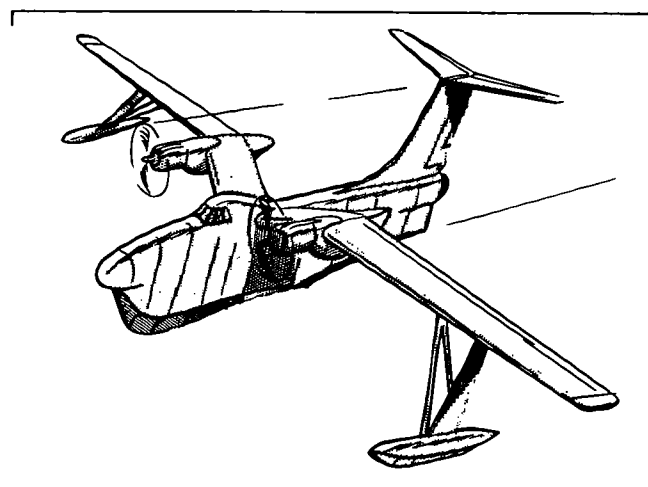
P5M-1

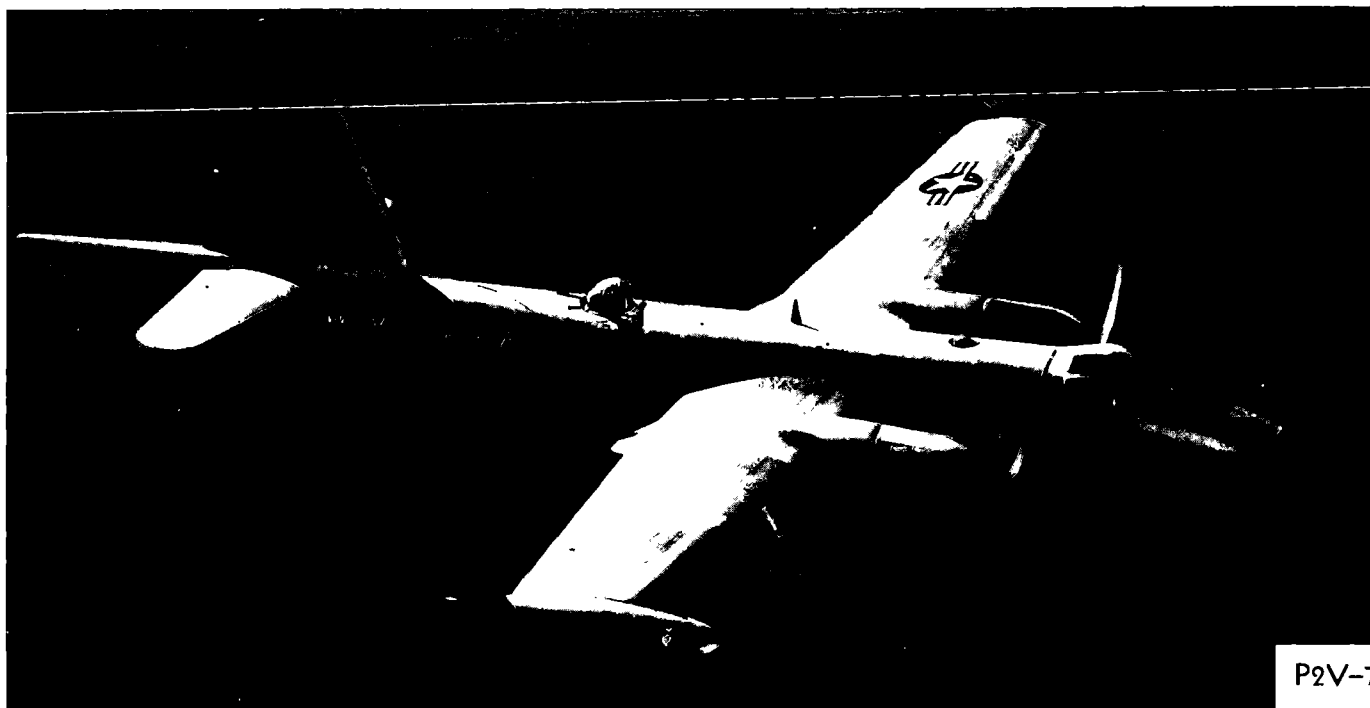


The P5M Marlin is a twin-engined, gull-wing, patrol boat designed primarily for ASW. Other duties include long-range radar mapping, mine laying, and open-sea rescue. A feature of the P5M is the length and depth of the hull aft of the main Vee step, which permits softer landings in rough seas without excessive pitching and bouncing, and reduces normal take-off time and distance. It is equipped with hydroflaps (underwater flaps) which aid maneuvering in restricted areas. Two versions of the Marlin have been produced: the P5M-1 and P5M-2. The high-mounted T-tail of the P5M-2 readily distinguishes it from the earlier P5M-1. Improvements incorporated in the -2 version include more powerful engines, increased fuel capacity, and the latest ASW electronic equipment. The long object projecting behind the stabilizer of the -2 houses electronic gear.

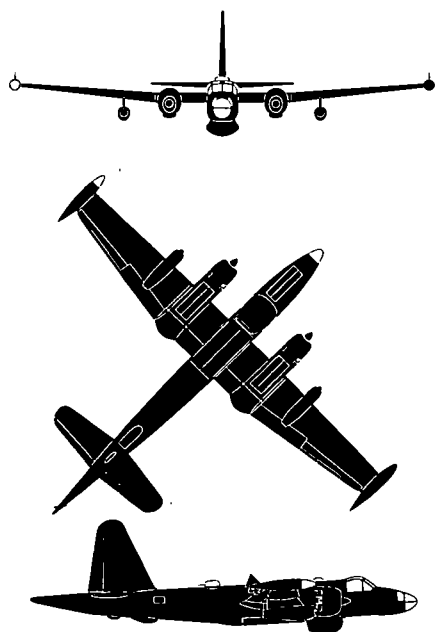
DATA APPLY TO P5M-2

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	MARTIN	Max. Range (Naut. Miles)	2,800 plus	No. of Engines	2
Wing Span	118'2"	Crew No.	7	Model No.	R-3350-32W
Length	101'	Max. Speed (Knots)	230 plus	Mfr.	WRIGHT
Combat Weight (Lbs.)	62,000 plus	Service Ceiling (Fr.)	22,000 plus	Type	Piston
				Rating Each	3,400 hp





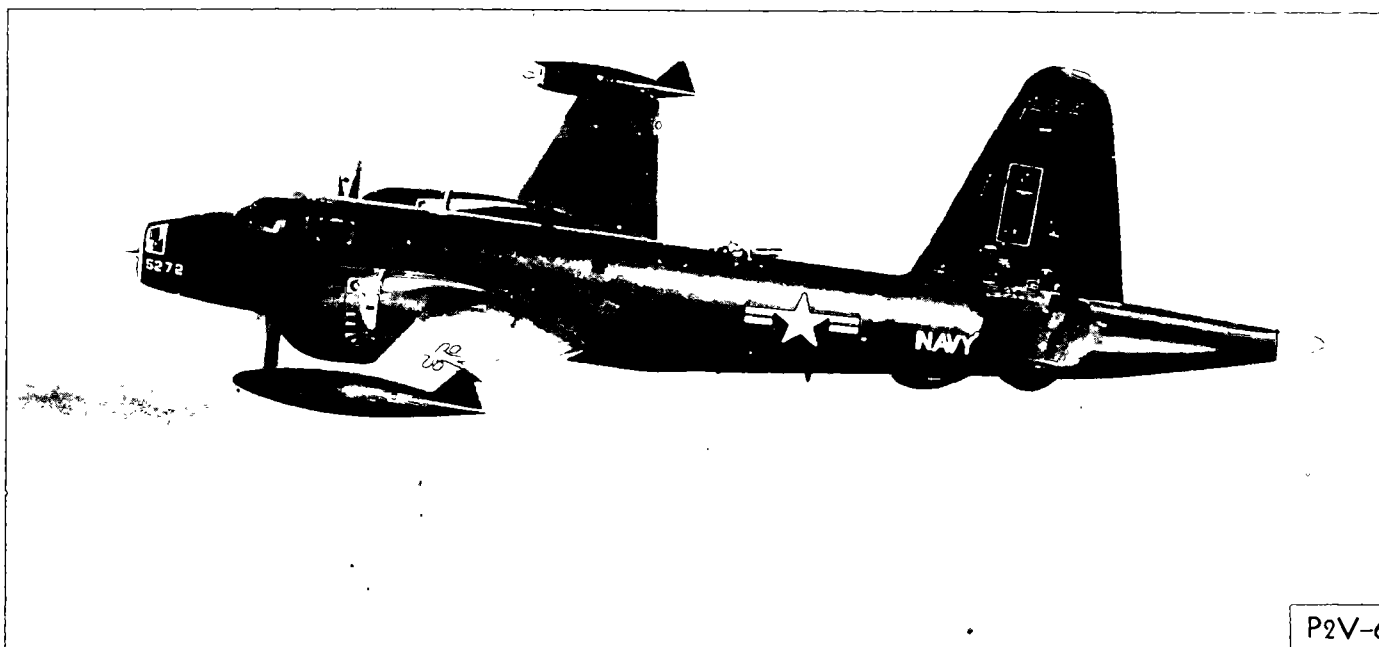
P2V-7



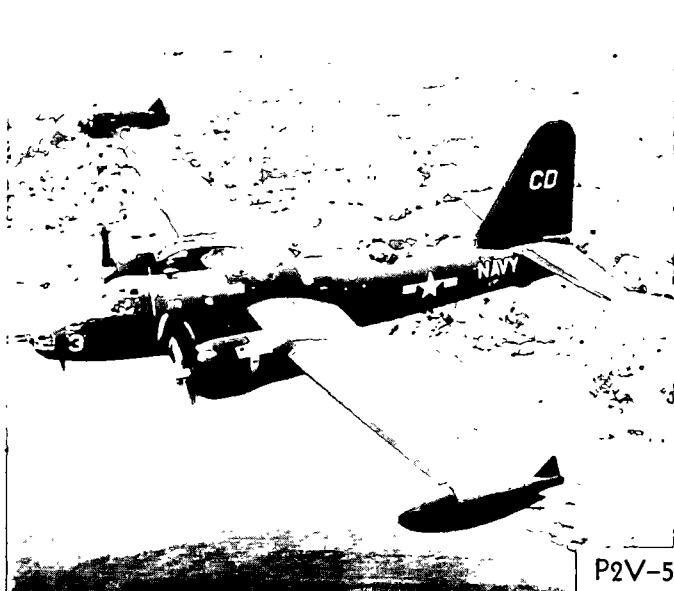
The P2V-7 Neptune, latest version in a long line of P2V's, is a two-engine, midwing, patrol aircraft, equipped with two additional turbojet engines to augment takeoff and combat performance. The turbojet engines are mounted beneath the wing in pods, outboard of the reciprocating engines. The tapering, straight wing has wing-tip pods that carry radar and landing lights in addition to fuel. Enlarged crew space, bulging cockpit canopy, modified nose landing gear, redesigned wing-tip pods and a simplified multifunction control system are added features of the -7 model. Although designed primarily for ASW, the P2V-7 is also used for patrol, mine-laying, or torpedo-bomber duties. The main recognition features are the long, straight wing; tall, bell-shaped fin and rudder; and narrow aft fuselage extending rearward beyond the tail surfaces. Between September 29 and October 1, 1946, a P2V set a world's straight-line-distance record by flying nonstop from Perth, Australia, to Columbus, Ohio, a distance of 11,235 miles.

DATA APPLY TO P2V-7

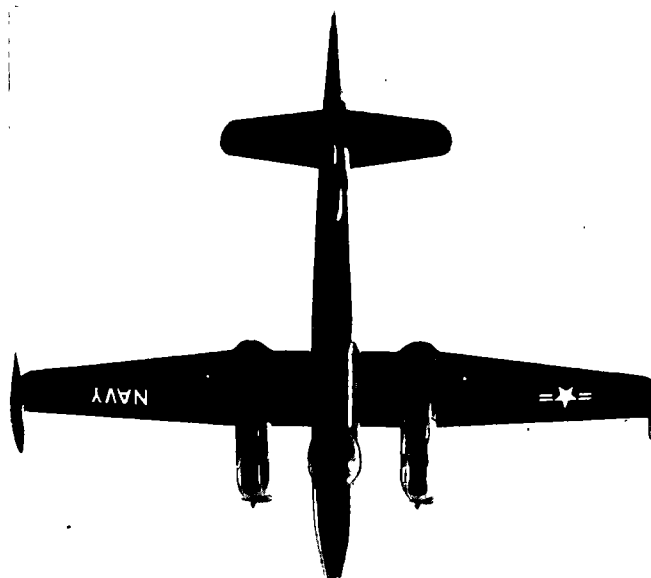
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	LOCKHEED	Max. Range (Naut. Miles)	2,600 plus	No. of Engines	2 Piston 2 Jet
Wing Span	104'	Crew No.	10	Model No.	R-3350-32W J34-WE-36
Length	98'	Max. Speed (Knots)	300 plus	Mfr.	WRIGHT WESTINGHOUSE
Combat Weight (Lbs.)	65,000 plus	Service Ceiling (Ft.)	30,000 plus	Type	Piston Compound Turbojet
				Rating Each	3,700 hp 3,400#



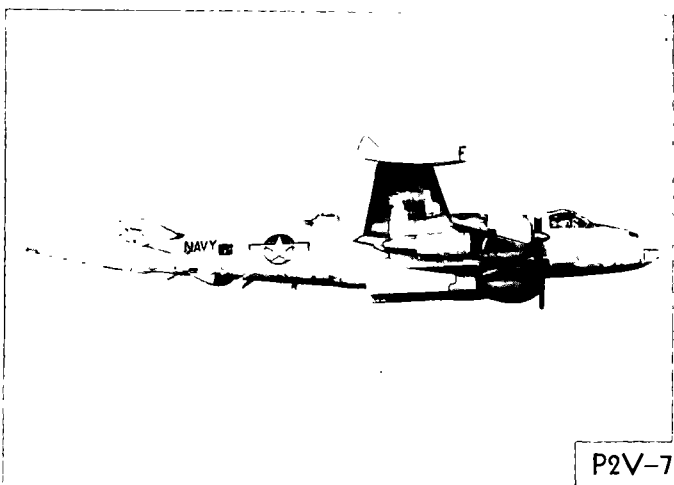
P2V-6



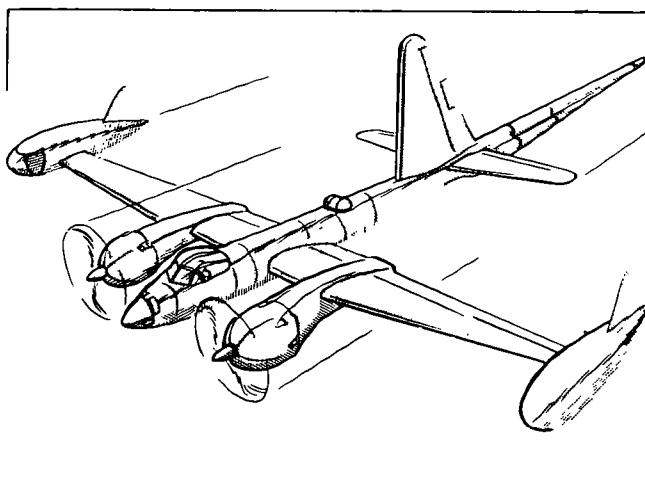
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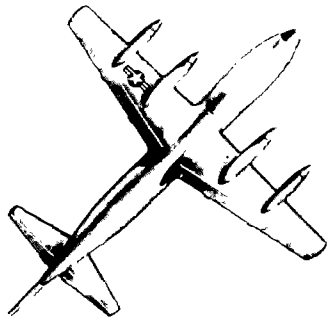
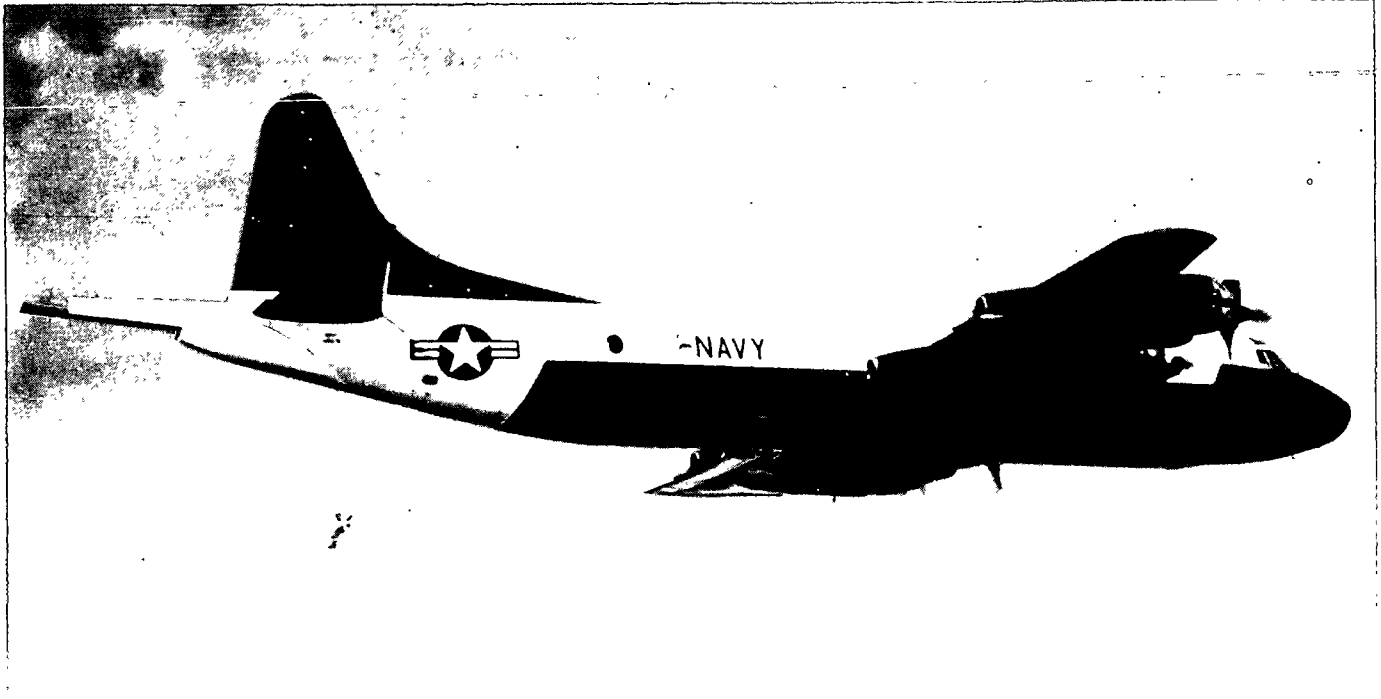


P2V-6



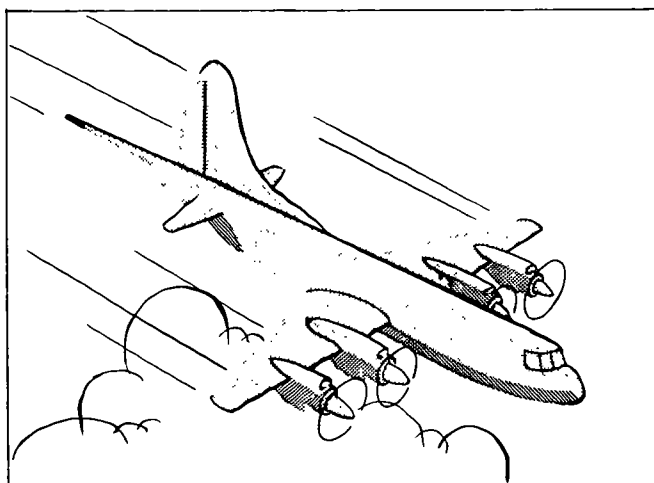
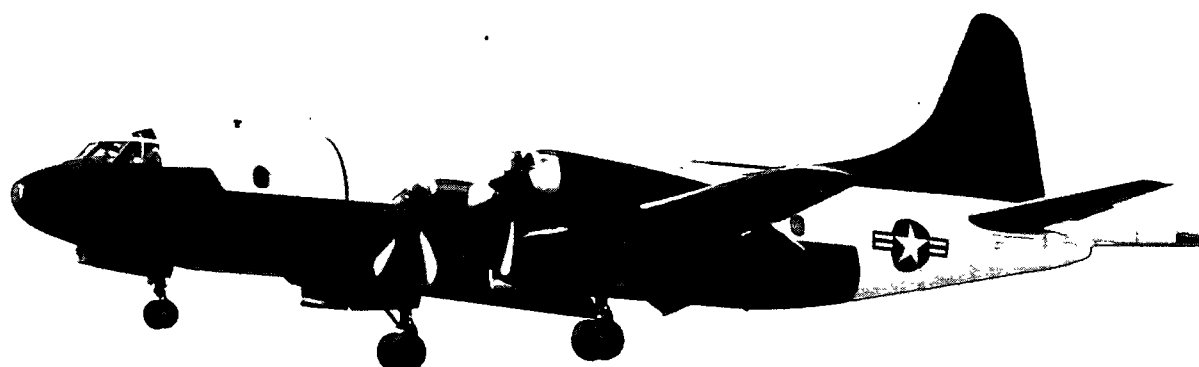
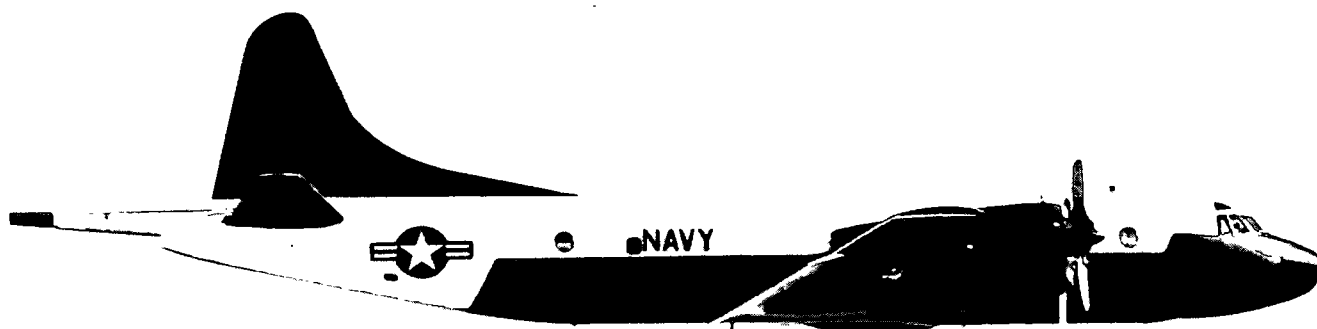
P2V-7

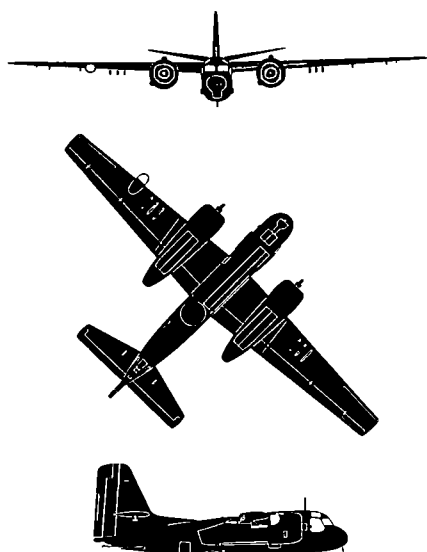




The P3V is the latest U.S. Navy Antisubmarine Warfare aircraft. It is derived from the commercial Lockheed Electra. Designed to supplant the P2V Neptune, the P3V is capable of operating for extended periods of time at altitudes from sea level to 30,000 feet and above. It is to be equipped with the latest electronic search devices as well as the latest navigation and communications equipment. Included is an advanced underwater detection apparatus and a magnetic anomaly detector in the tail. The P3V is powered by four Allison 4500 h.p. turbine engines which will provide speeds in excess of 460 m.p.h. Cruising speed will be about 380 m.p.h. The P3V can cruise using two inboard engines only. It has good endurance at low altitudes, and carries a crew of ten. It is capable of carrying a large variety of armament, including rockets, depth charges, torpedoes, and special weapons.

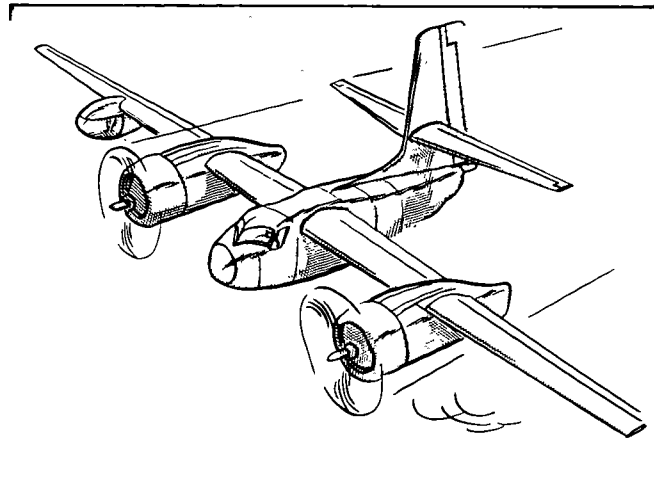
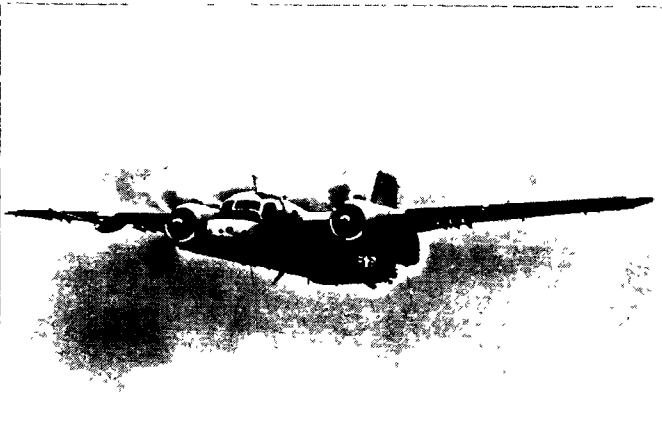
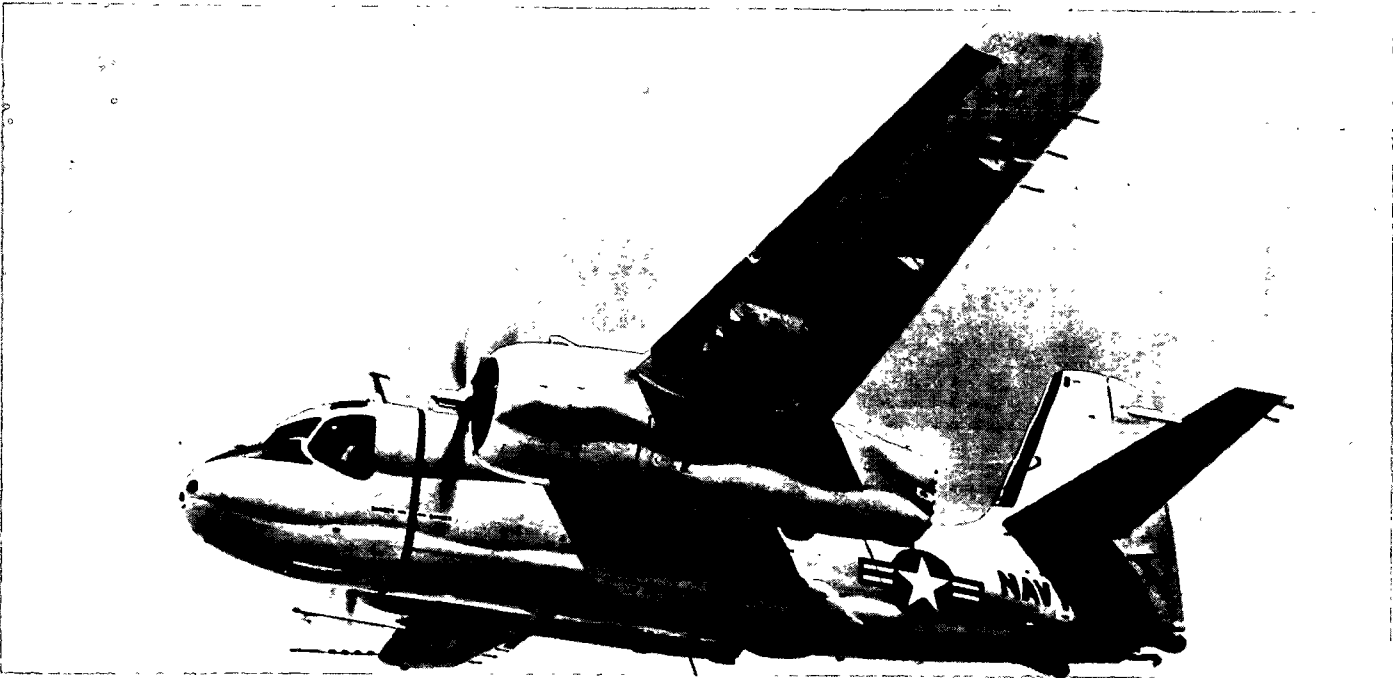
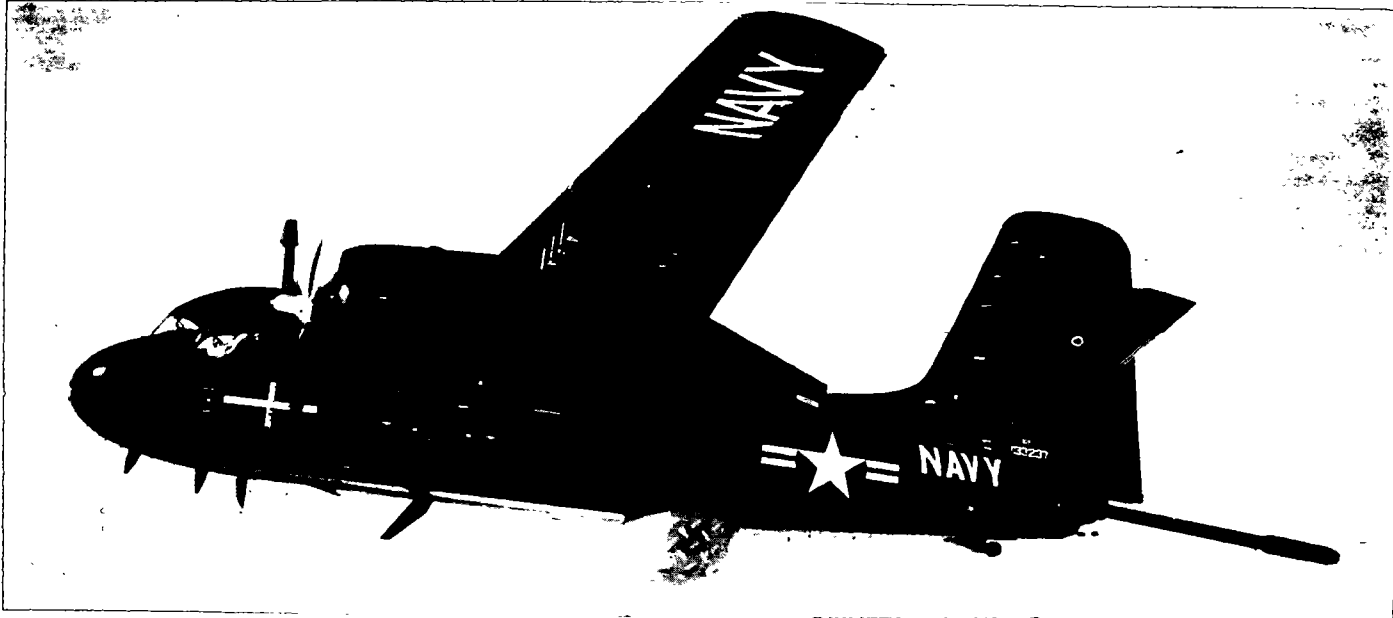
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr	LOCKHEED	Max. Range (Naut. Miles)	3,400	No. of Engines	4
Wing Span	99'	Crew No	10	Model No	T56-A-10W
Length	104'6"	Max Speed (Knots)	400 plus	Mfr	ALLISON
Combat Weight (Lbs.)	125,000	Service Ceiling (Ft.)	30,000 plus	Type	Turboprop
				Rating Each	4,500 hp.



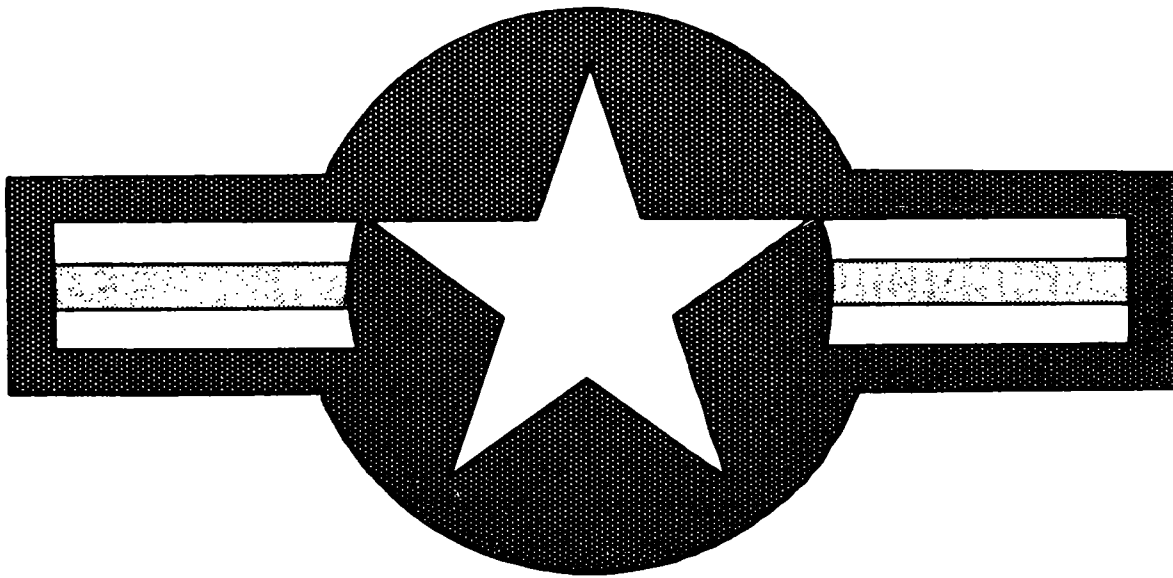


The S2F Tracker is a twin-engine, high-wing ASW aircraft designed to search for, detect, and destroy enemy submarines under all weather conditions. The S2F is the first U.S. carrier aircraft combining features for submarine search and attack in one airplane. It utilizes radar, sonobuoys, and MAD gear to detect an enemy submarine, and then uses torpedoes, depth charges, or rockets to destroy it. The Tracker has accommodations for four, and it is possible to interchange all crew positions in flight. A retractable radome is located under the rear fuselage behind the bomb-bay. A later version, the S2F-2 is distinguished by an enlarged torpedo bay which accommodates a larger antisubmarine weapon. A trainer-utility version of the S2F, the TF, has been produced, and a Canadian version, the CS2F-1, is used by the Royal Canadian Navy. The latest version of the S2F, the S2F-3, differs very little from its predecessors in external appearance; however, it has actually been modified extensively. The forward fuselage has been lengthened, the aft sections of the engine nacelles have been deepened for sonobuoy stowage space, and the wing tips have been rounded.

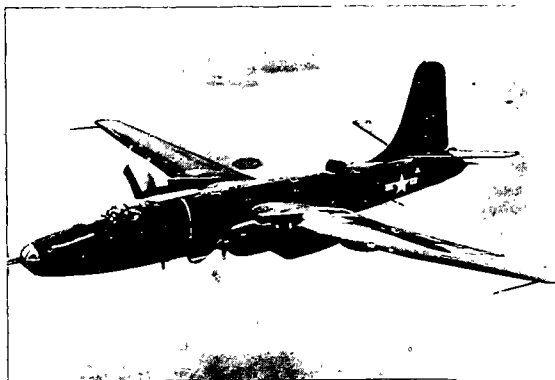
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	GRUMMAN	Max. Range (Naut. Miles)	800 plus	No. of Engines	2
Wing Span	69'8"	Crew No.	4	Model No.	R-1820-82
Length	42'	Max. Speed (Knots)	225 plus	Mfr.	WRIGHT
Combat Weight (Lbs.)	22,000 plus	Service Ceiling (Ft.)	20,000	Type	Piston
				Rating Each	1,525 hp



OTHER
U. S. NAVY
AIRCRAFT

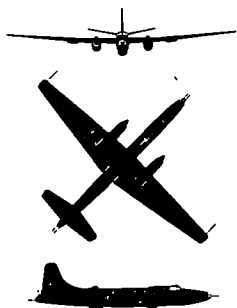


MARTIN



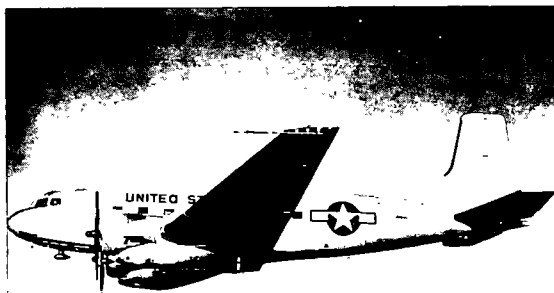
P4M MERCATOR

Mfr.	MARTIN	Max Speed (Knots)	330 plus
Wing Span	114'	Service Ceiling (Ft.)	30,000
Length	86'	Na. & Type of Engines	2 Piston 2 Jet
Combat Weight (Lbs.)	76,000 plus	Model No.	R-4360-20 J-33-A-10
Max. Range (Naut Miles)	2,400 plus	Mfr.	P & W ALLISON
Crew No.	13	Rating Each	3,250 hp 4,600#



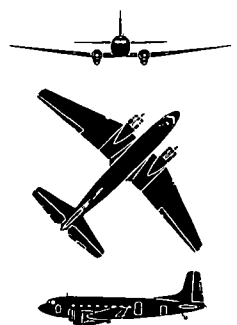
The P4M Mercator is a long-range, high-altitude, patrol and search plane powered by two radial reciprocating engines and two jet engines. The jets are housed in the nacelles directly below the reciprocating engines. The long, rather narrow, tapering wing is located midway along the fuselage, with the undercarriage retracting into the wings outboard of the engines. A nose wheel is situated below the pilot's cockpit. The tall vertical fin fairs smoothly into the fuselage and there is a tail-gunner position just aft of the rudder. The stabilizer has even taper with rounded tips and considerable dihedral.

DOUGLAS



R4D-8 SKYTRAIN (USAF C-47)

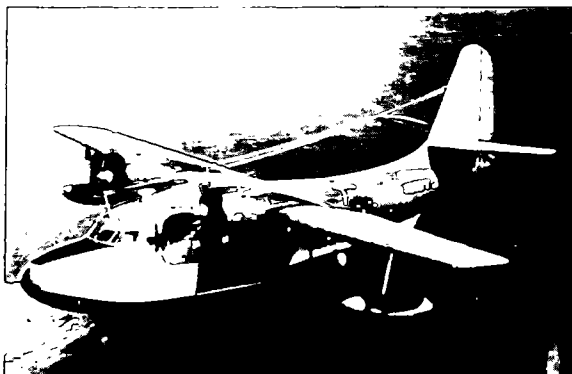
Mfr.	DOUGLAS	Max. Speed (Knots)	230
Wing Span	90'	Service Ceiling (Ft.)	22,000 plus
Length	67.9'	Na. & Type of Engines	2 Piston
Combat Weight (Lbs.)	31,000	Model No.	R-1820-80
Max. Range (Naut Miles)	3,150	Mfr.	WRIGHT
Crew No.	5	Rating Each	1,475 hp



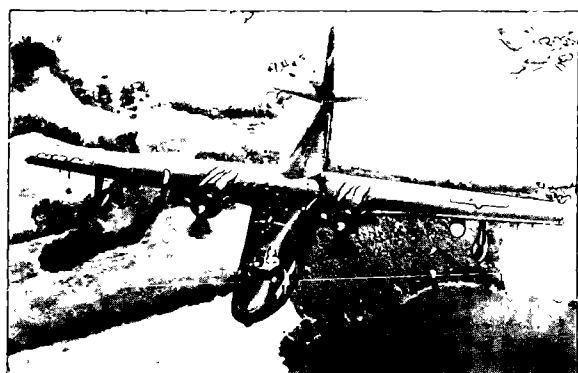
The R4D-8 is a twin-engined, low-wing cargo-transport. It is the Navy version of the Douglas Super DC-3 and carries the Air Force designation C-47. In overall appearance it is similar to the previous models of the R4D series except for its larger fin and rudder, square-tipped wings and tail, and larger engine nacelles. The tail fin fairs far forward into the fuselage, and the wings have sharp taper on the outer section of the leading edge but only slight taper on the trailing edge. The center section of the wing has no dihedral, but there is noticeable dihedral in the outer section.

UF-1 ALBATROSS (USAF SA-16A)

GRUMMAN



Mfr.	GRUMMAN	Max. Speed (Knots)	215
Wing Span	80'	Service Ceiling (Ft.)	24,000 plus
Length	60'7"	No. & Type of Engines	2 Piston
Combat Weight (lbs.)	33,000	Model No.	R-1820-76A
Max. Range (Naut. Miles)	1,900 plus	Mfr.	WRIGHT
Crew No.	4	Rating Each	1,425 hp.



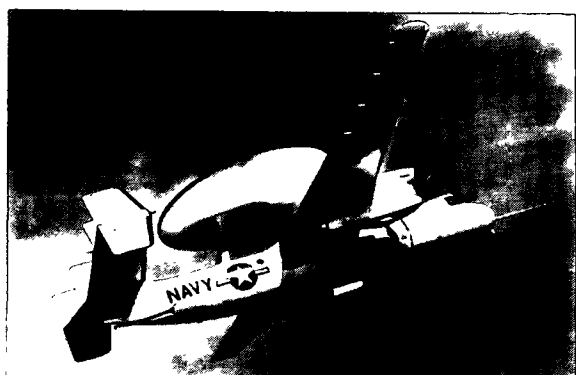
The UF-1 Albatross is a twin-engined, general-purpose, Navy amphibian designed for personnel and cargo transport, litter evacuation, and rescue operations. Originally designated XJR2F, the Albatross is in service with the Navy, Air Force, and Coast Guard. The Air Force designation for the slab-sided amphibian is SA-16. Equipment on the Albatross varies: the radome may be seen under the port wing or on the nose, and the external tanks may be absent or replaced by bombs or depth charges. The Albatross was credited with saving more than 900 lives during the Korean conflict.

W2F HAWKEYE

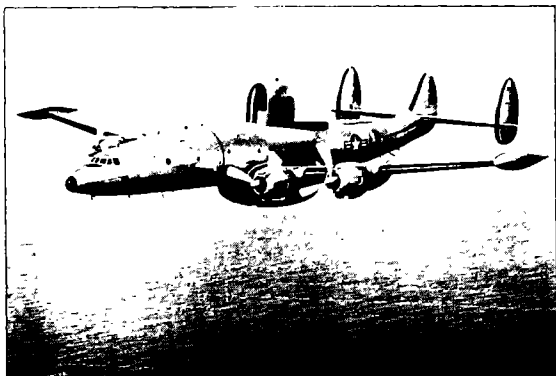
GRUMMAN



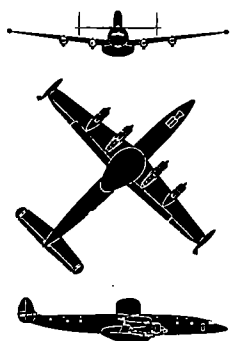
Mfr.	GRUMMAN	Max. Speed (Knots)	
Wing Span	80'7"	Service Ceiling (Ft.)	
Length	56'4"	No. & Type of Engines	2 Turboprop
Combat Weight (lbs.)	49,500	Model No.	T-56-A8
Max. Range (Naut. Miles)		Mfr.	ALLISON
Crew No.	5	Rating Each	



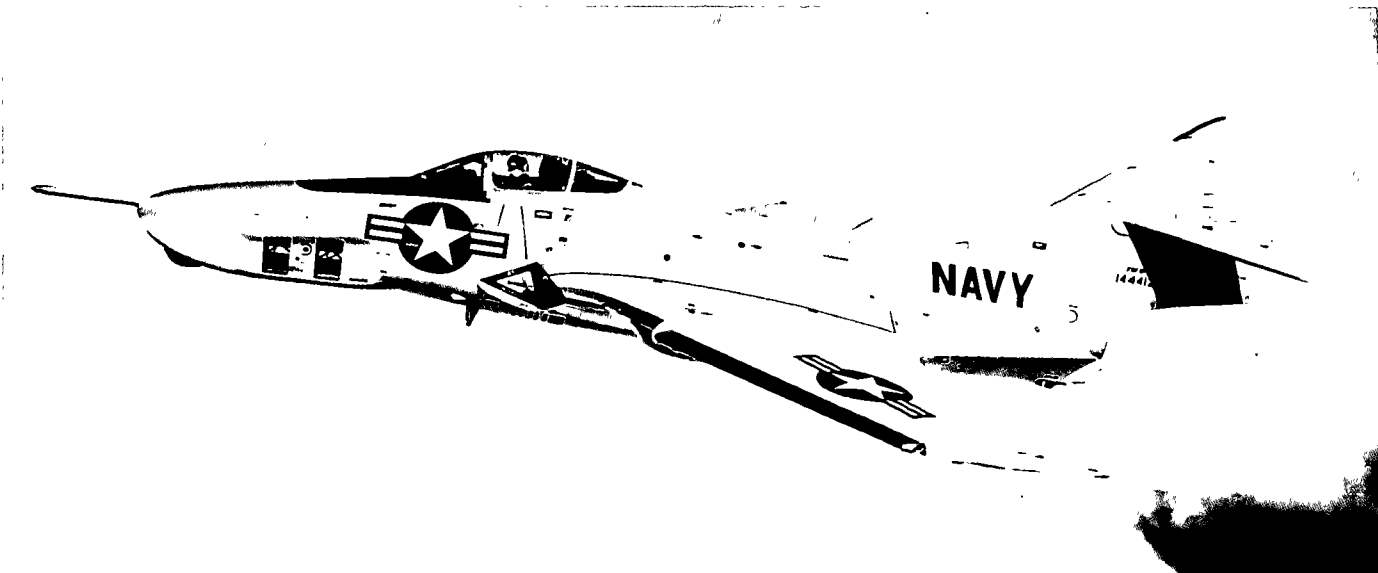
The W2F-1 Hawkeye is the Navy's newest airborne scout. It is a carrier-based twin-engine aircraft designed for early warning and intercept control. Its high fixed wing sets slightly forward of center of the fuselage. Quadruple rudders set on positive dihedral horizontal stabilizers accentuate the tail. A huge revolving rotodome located atop the fuselage houses the antenna for the high resolution radar, and is an obvious recognition feature.



Mfr.	LOCKHEED	Max. Speed (Knots)	280
Wing Span	123'	Service Ceiling (Ft.)	22,000 plus
Length	116.2'	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	145,000	Model No.	R-3350-34
Max. Range (Naut. Miles)	3,700 plus	Mfr.	WRIGHT
Crew No.	26 plus	Rating Each	3,250 hp.



The WV-2 is a high-altitude reconnaissance and early-warning radar intelligence aircraft. It is a development of the R7V Super Constellation and retains all of the R7V's recognition features. In addition, the WV-2 is easily recognized by its two large radomes, one above the fuselage and the other below the fuselage. This "flying radar station" carries radar consoles, plotting tables, auxiliary radar units, and navigation equipment. A crew of up to 31, including relief pilots, radar operators, and technicians, can be accommodated. An Air Force version of the WV-2 is designated EC-121C.



The F9F-8P is a photographic-reconnaissance version of the F9F Cougar, with a lengthened forward fuselage.



The F9F-8T COUGAR is a two-seat fighter-trainer version of the F9F-8 jet fighter.



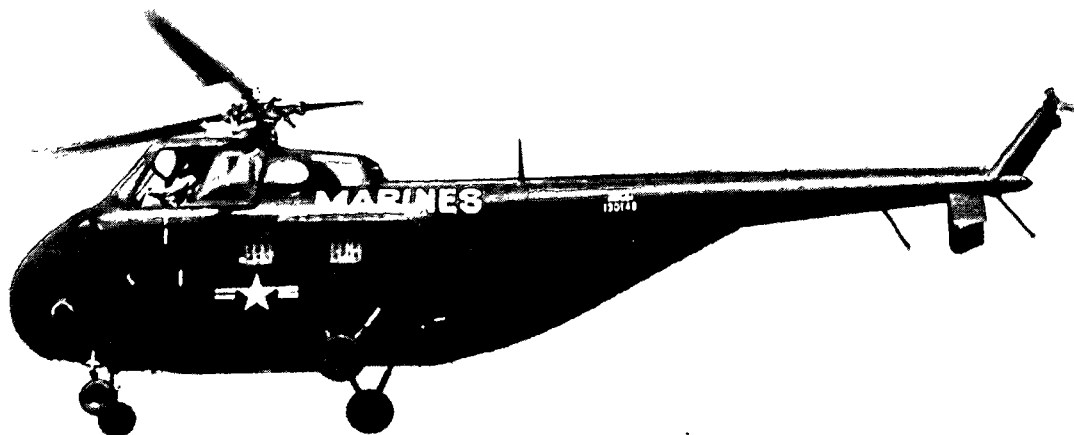
The GV-1 is the Marine version of the Air Force C-130 and is used as a refueling tanker.



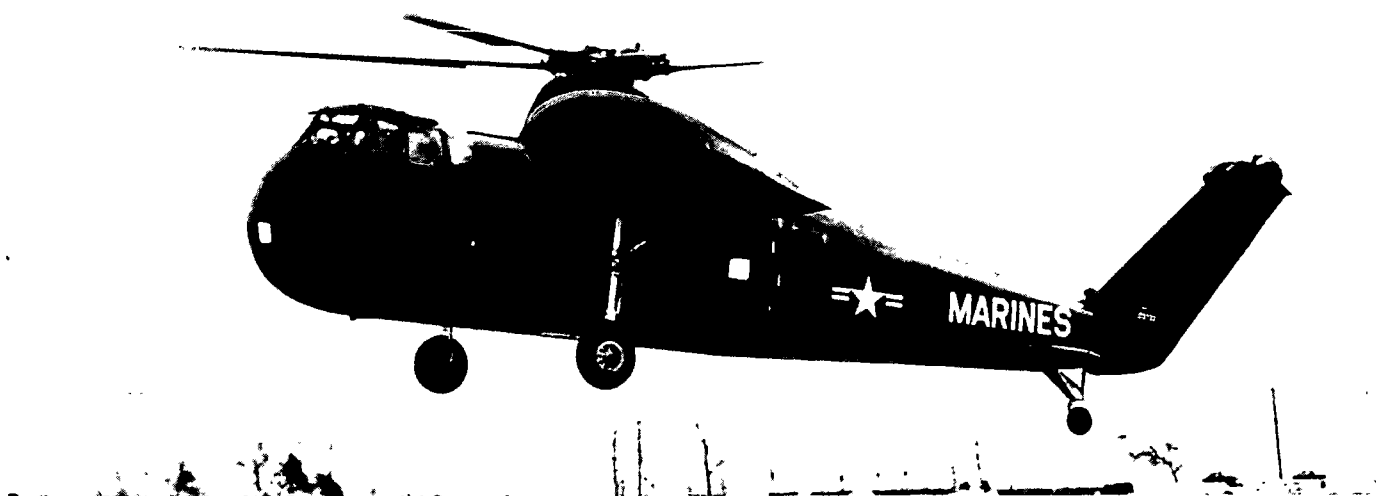
The HOK is a Marine helicopter used for observation, rescue, and liaison.



The HO4S is used primarily for air-sea rescue missions, utility, and training.



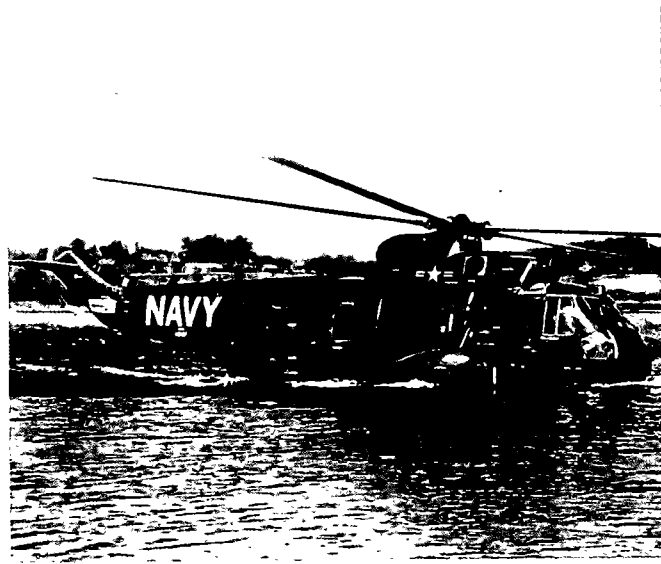
The HRS is the Marine assault transport version of the HO4S.



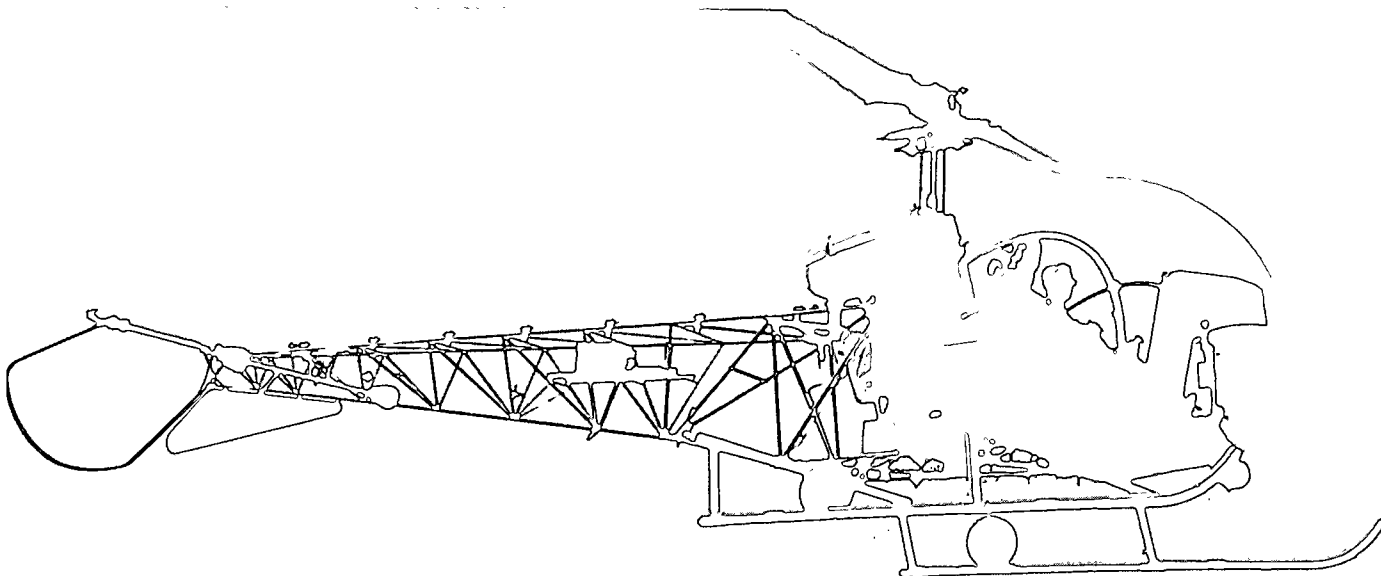
The HR2S is a Marine assault transport for both persannel and carga.



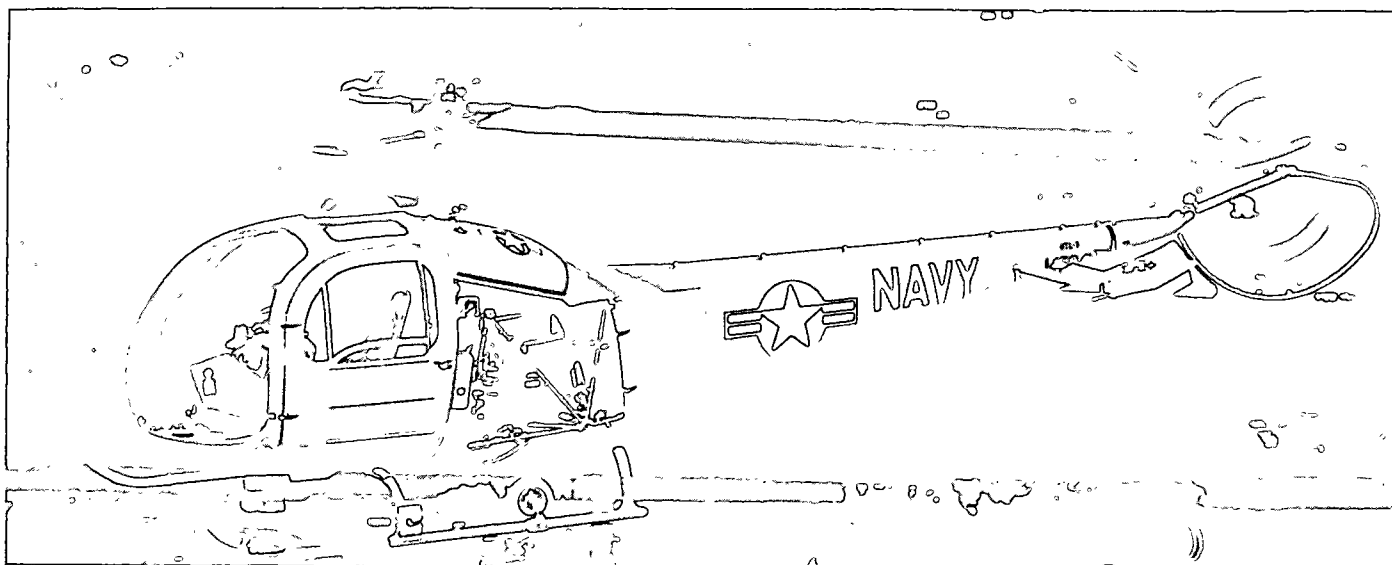
The HSS is used primarily far ASW search and attack missions. A Marine general transport version of the HSS is designated the HUS.



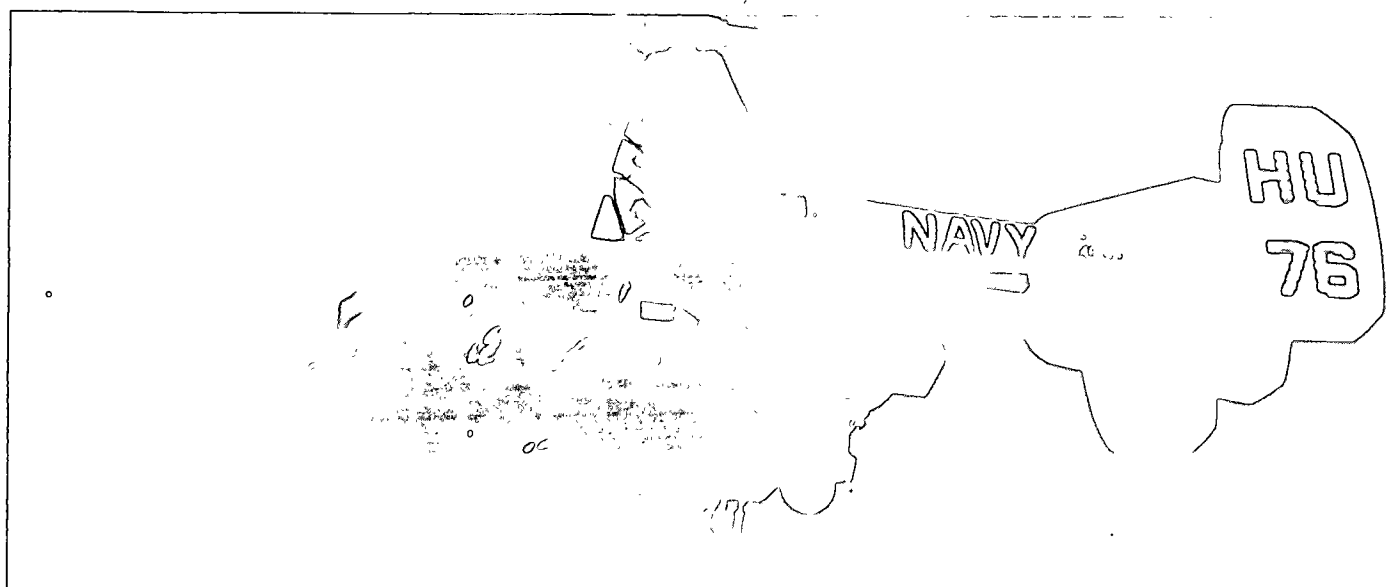
The HSS2 is an amphibiaus antisubmarine helicopter designed for all-weather aperation.



The HTL-5 is a trainer and utility helicopter.



The HTL-7 is a trainer and utility helicopter.



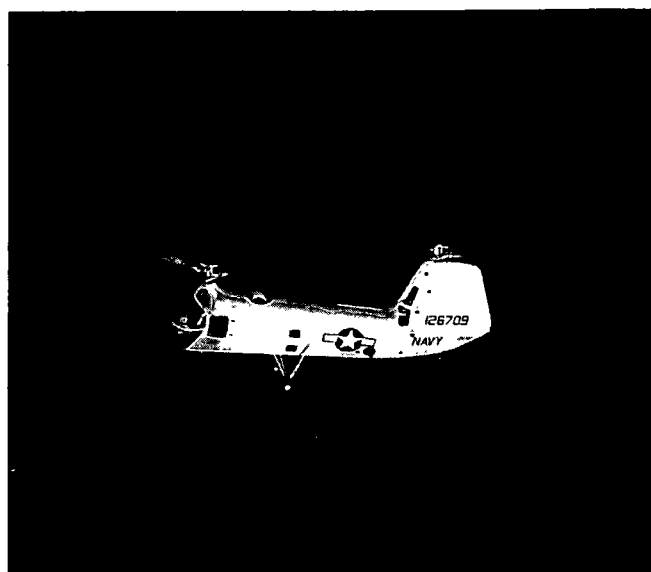
The HUK is a utility version of the HOK.



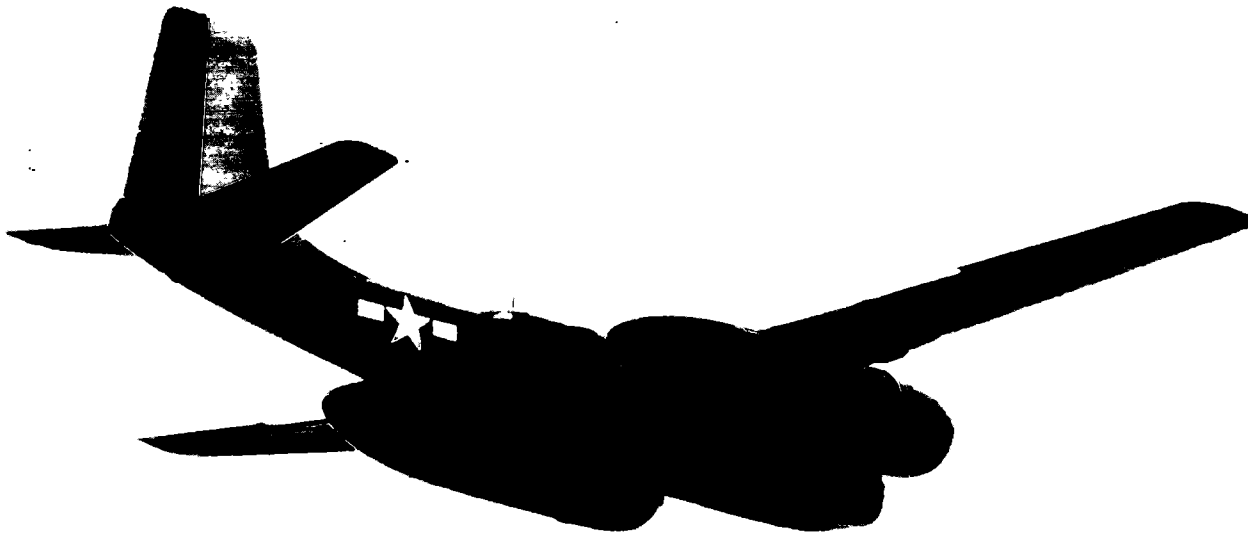
The HU2K is a general utility helicopter.



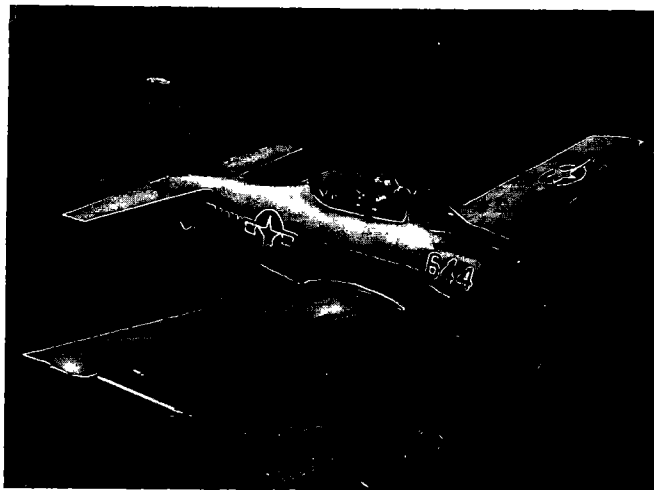
The HUL is a light utility helicopter.



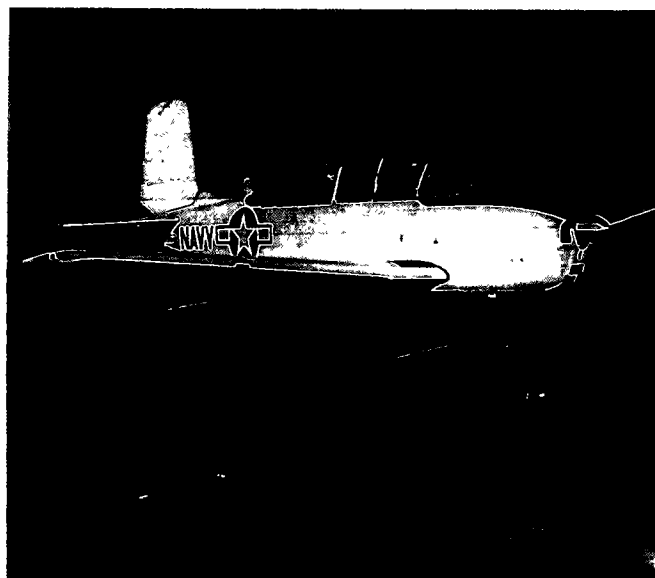
The HUP is a trainer and utility helicopter.



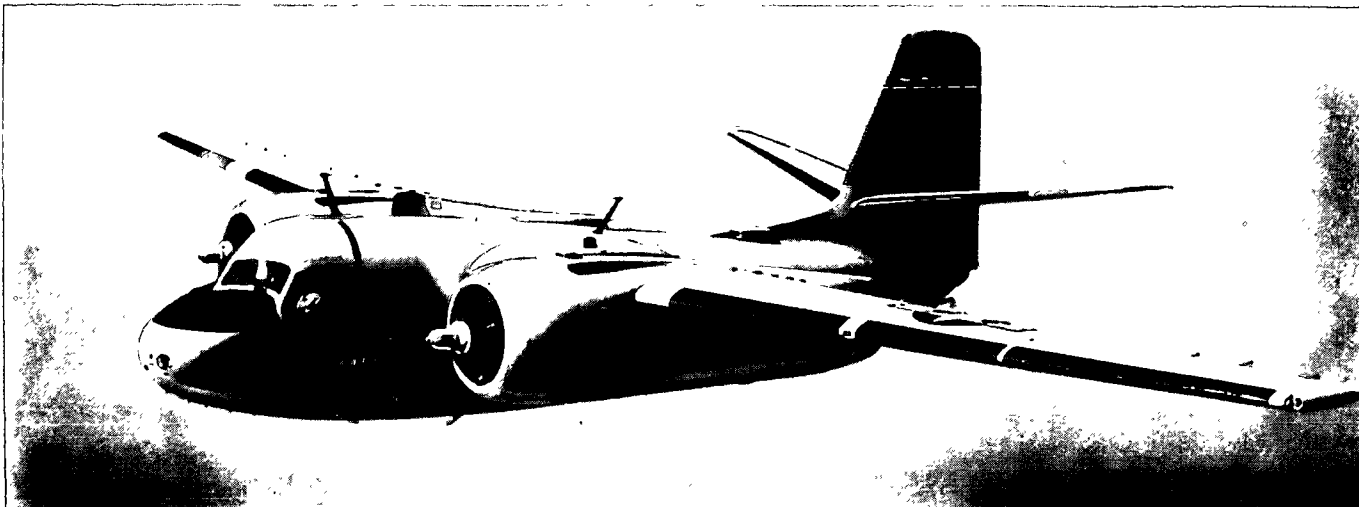
The JD is a utility aircraft used primarily for target towing.



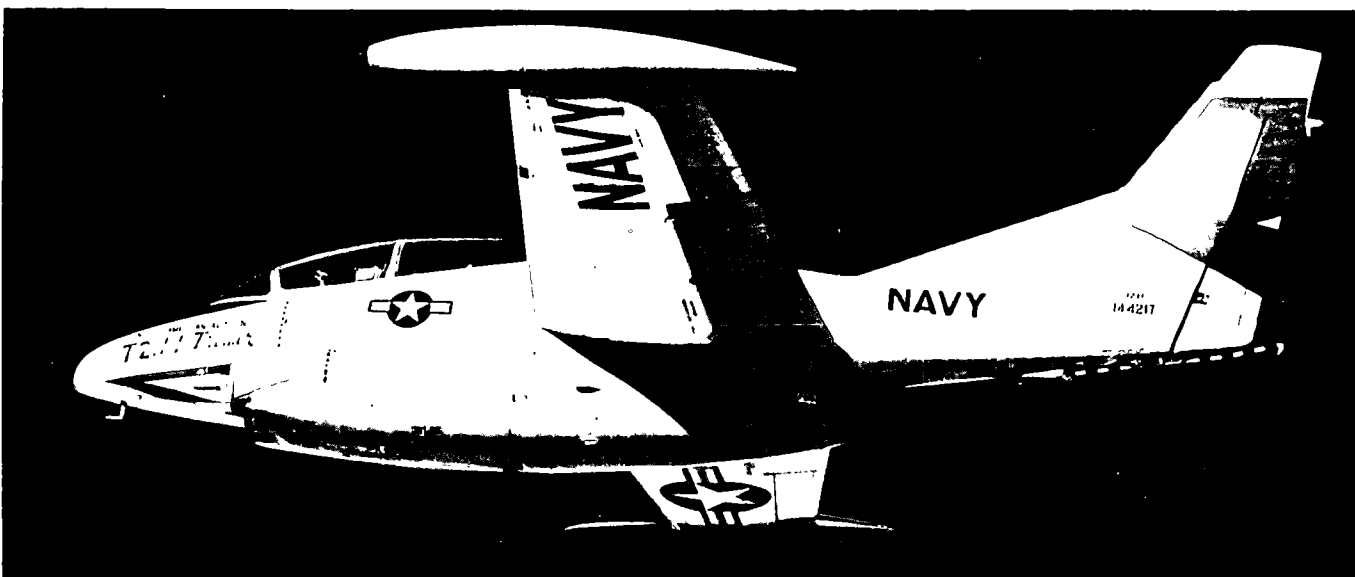
The T-28 high-performance, two-place, single-engine, propeller-driven trainer.



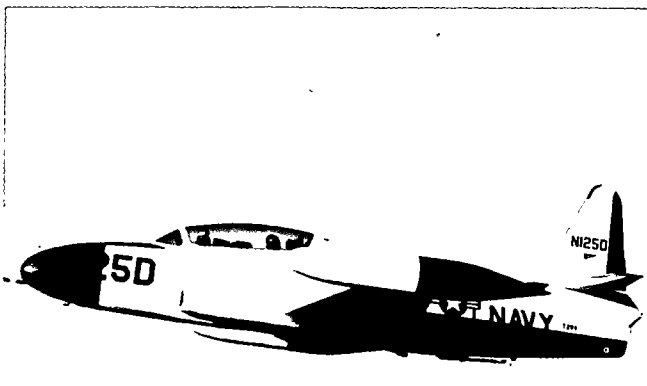
The T-34 is a two-place, single-engine, propeller-driven trainer with retractable tricycle landing gear. It replaced the SNJ.



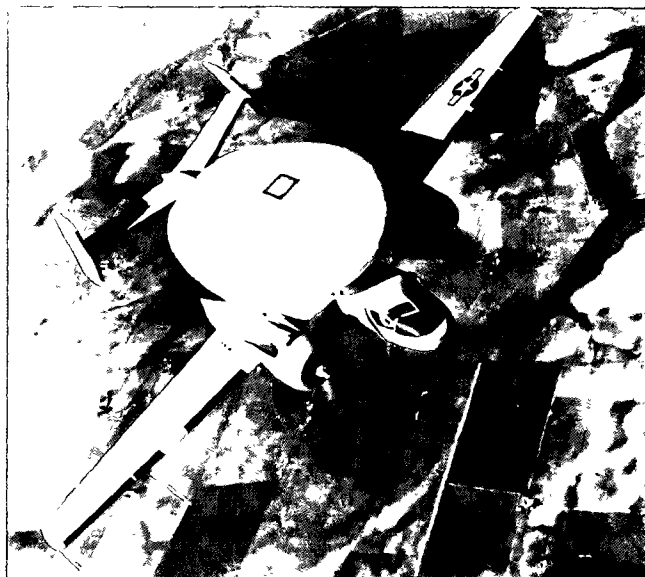
The TF-1 TRADER is the transport version of the S2F Tracker.



The NORTH AMERICAN T2J jet trainer can be operated from land bases or carriers.

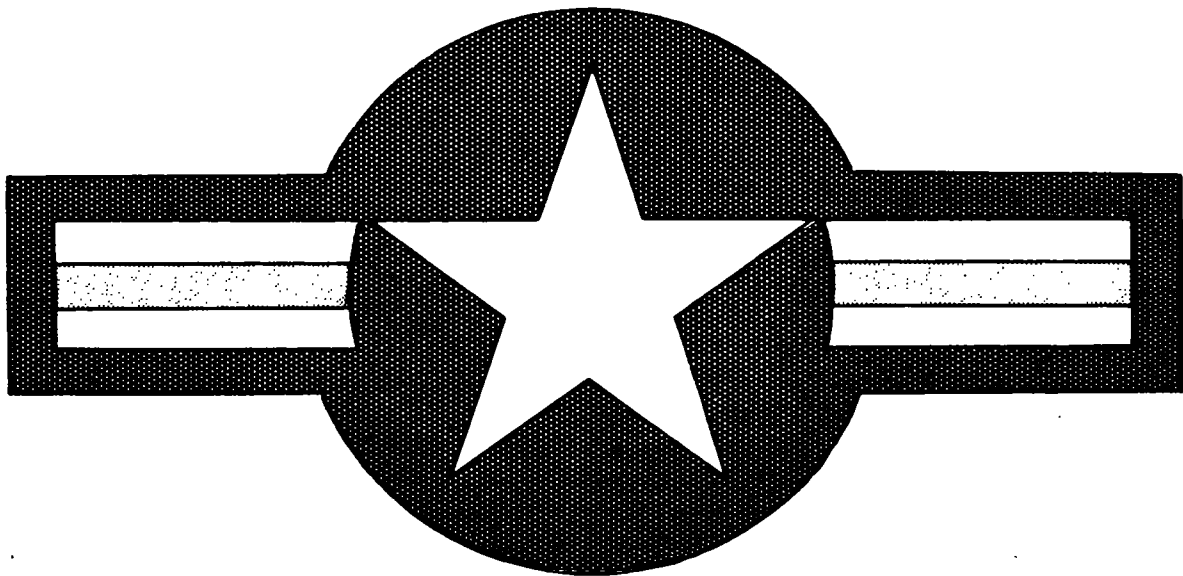


The T2V-1 SEA STAR is a two-seat all-purpose jet trainer that operates from land or carrier bases.

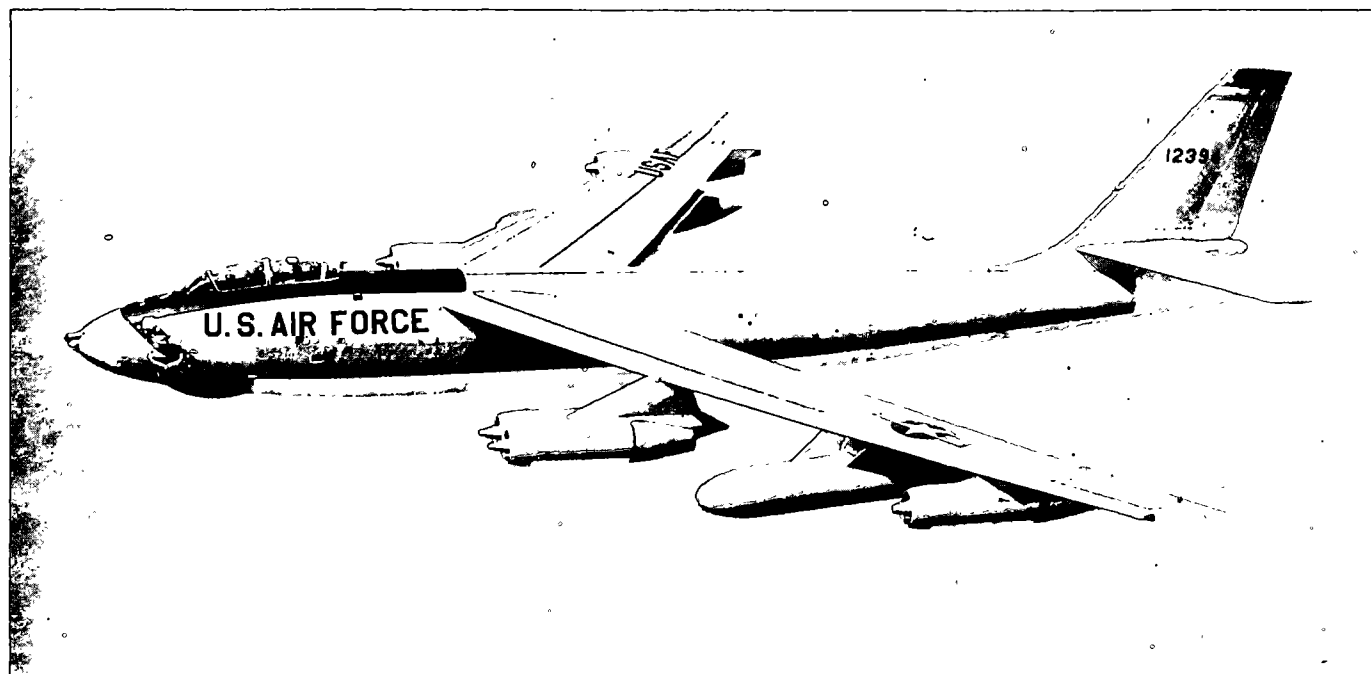


The WF2 TRACER is a modification of the S2F tracker, with the main difference being the huge radome for housing detection equipment, and the dual-fin tail.

MAJOR
U. S. AIR FORCE
AIRCRAFT



1. The first part of the report is a summary of the work done during the past year. It includes a list of the projects completed and a brief description of the results. The second part is a detailed account of the work done on each project. It includes a description of the objectives, the methods used, and the results obtained. The third part is a discussion of the work done and a comparison of the results with those obtained in previous years. The fourth part is a list of the references used in the report.



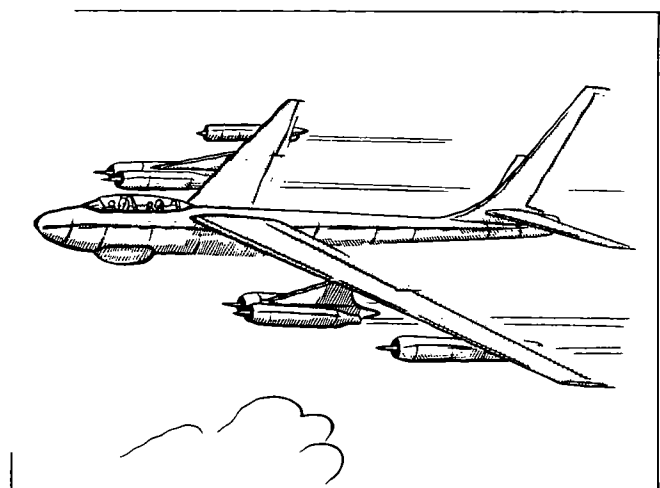
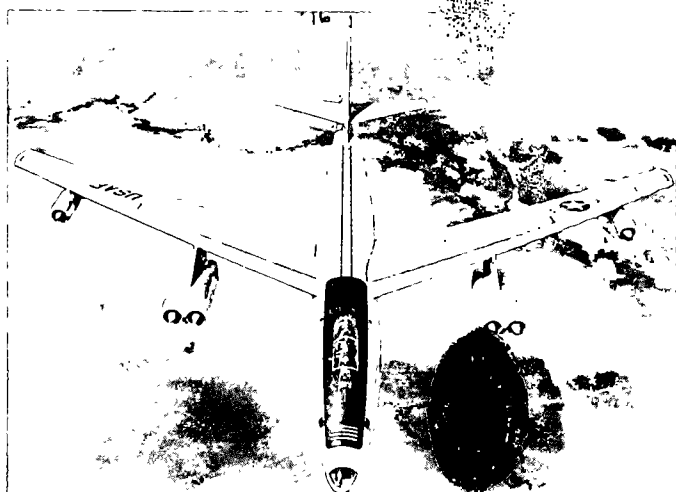
The B-47 is a high-wing medium bomber powered by six jet engines slung on pylons beneath the wings. Two engines are mounted in a single pod outboard of the fuselage and single engines are mounted near each wing tip. The wing (slight negative dihedral) and horizontal stabilizer (no dihedral) are sweptback and tapered, with squared-off tips. The fuselage is long and narrow with a bubble canopy. The tail cone extends beyond the tall, tapering, sweptback vertical stabilizer. The day-or-night, long-range, photoreconnaissance version (RB-47E) has a slightly longer nose than the standard B-47.

DATA APPLY TO B-47E

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	BOEING	Max. Range (Naut. Miles)	4,340	No. of Engines Model No. Mfr. Type Rating Each	6
Wing Span	116'	Crew No.	3		J47-GE-25
Length	107'	Max. Speed (Knots)	528		GE
Combat Weight (Lbs.)	133,000	Service Ceiling (Ft.)	39,300		Turbojet
					7,200 approx.

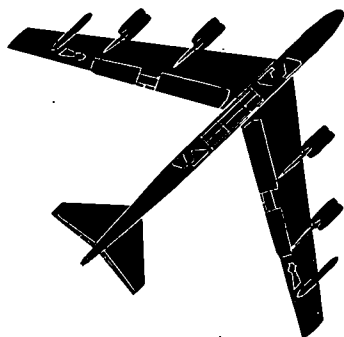
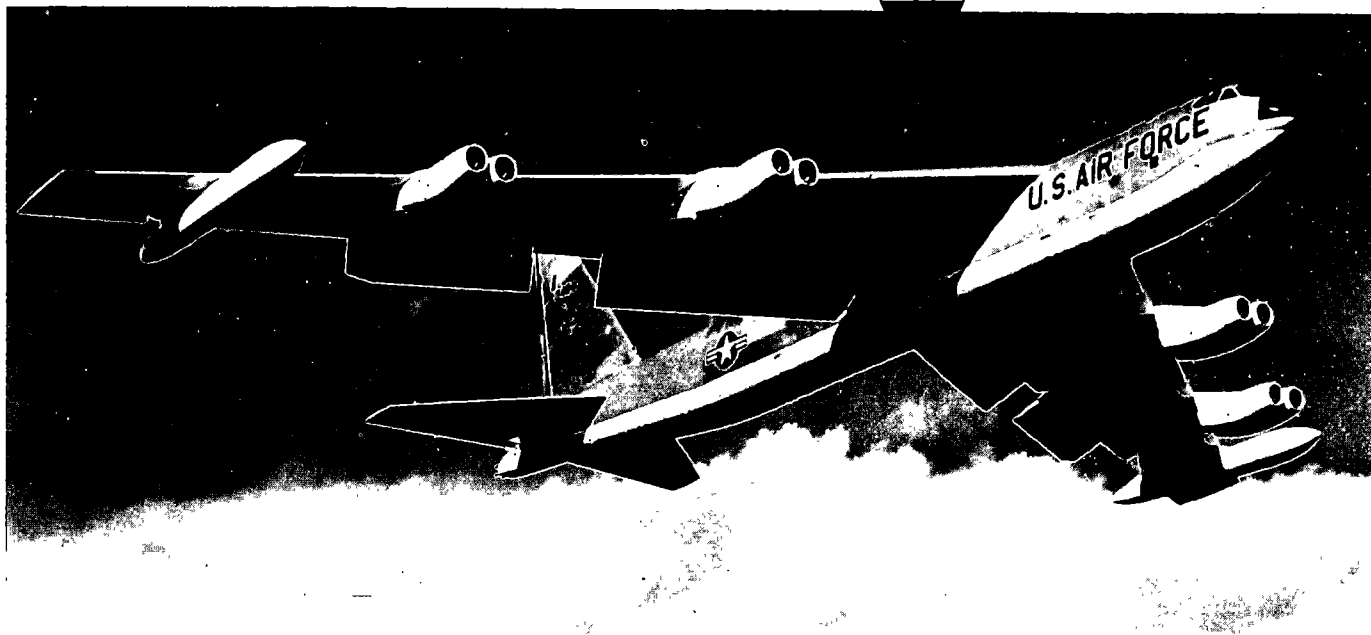
B-47 STRATOJET

BOEING



BOEING

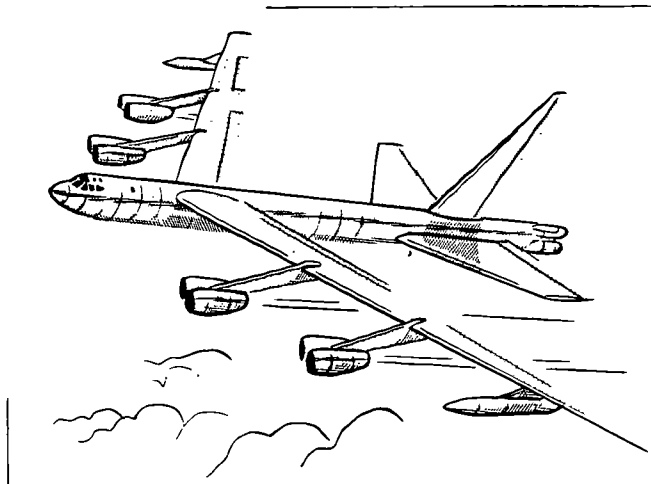
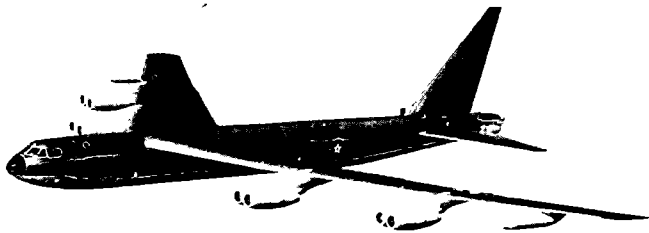
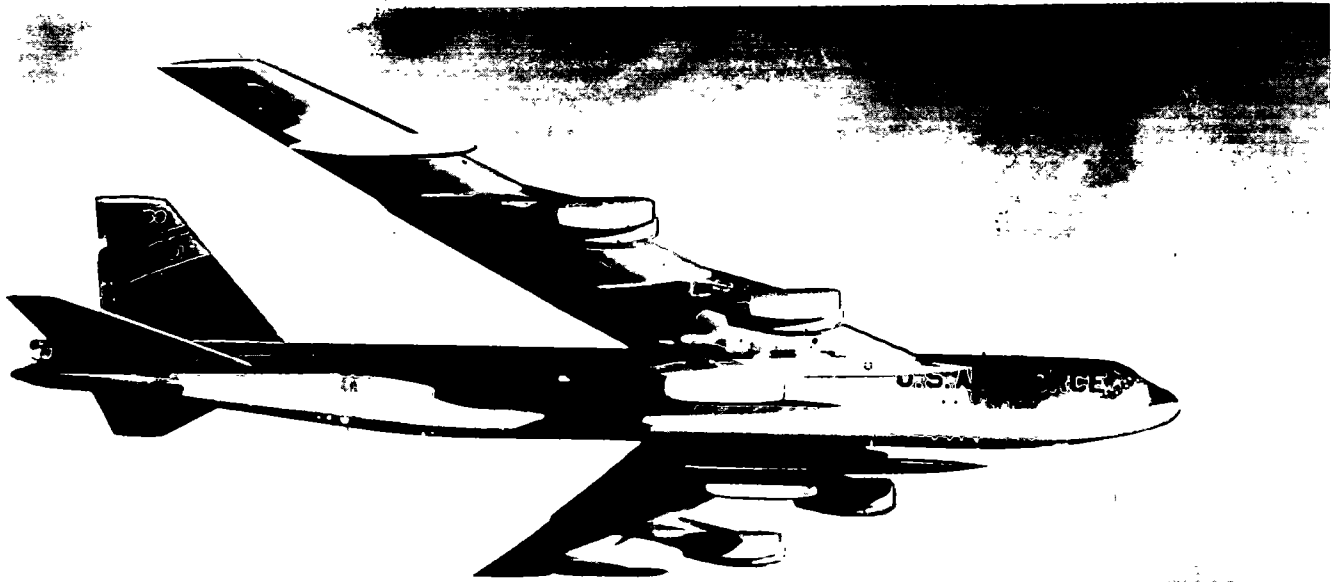
B-52 STRATOFORTRESS



The B-52 is a sweptwing, long-range heavy bomber. The eight jet engines, two in a pod, are slung under the wing on short pylons. The wing and large horizontal stabilizer are sweptback and tapered, both with squared-off tips. The tall, square-tipped vertical stabilizer emphasizes the overall angularity of this aircraft. This overall angularity and the large size are probably the B-52's most useful recognition features. The B-52G (Missile Platform) has a shorter vertical stabilizer than other series aircraft, fixed external tanks, and enlarged nose radome. It will carry the Quail and the Hound Dog missiles.

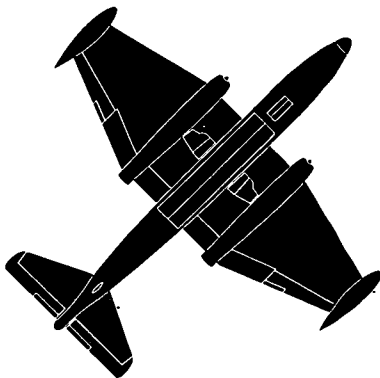
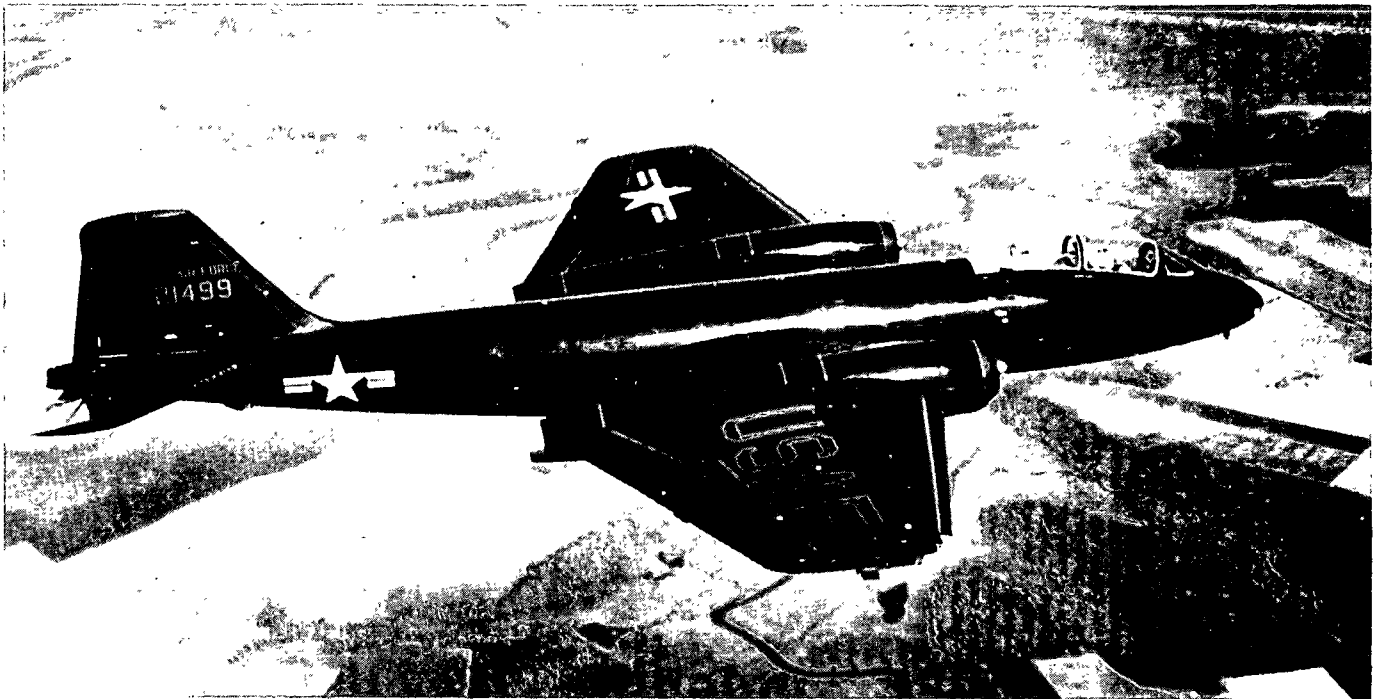
DATA APPLY TO B-52G

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	BOEING	Max. Range (Naut. Miles)	7,200 plus	No. of Engines	8
Wing Span	185'	Crew No.	6	Model No.	J57-P-43WB
Length	157.6'	Max. Speed (Knots)	553	Mfr.	P & W
Combat Weight (Lbs.)	280,000 approx.	Service Ceiling (Ft.)	47,100	Type	Turbojet
				Rating Each	13,750 #



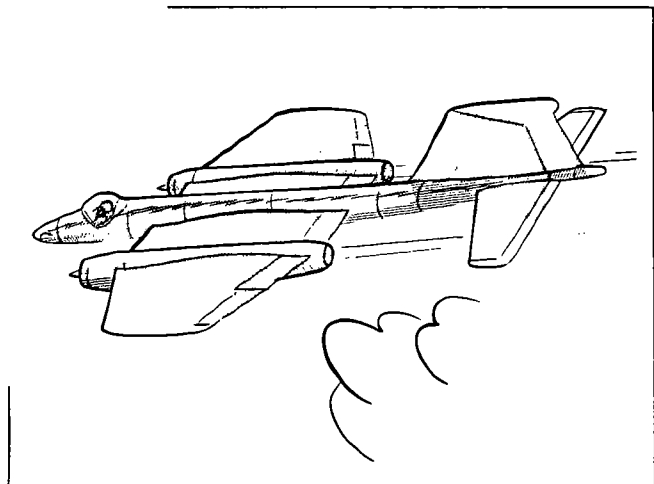
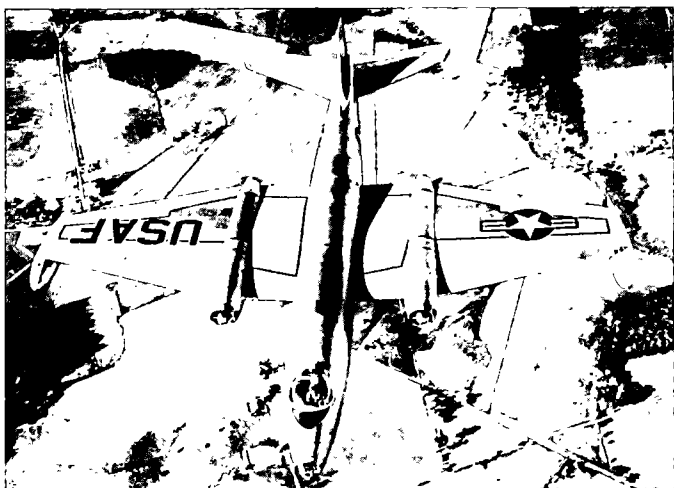
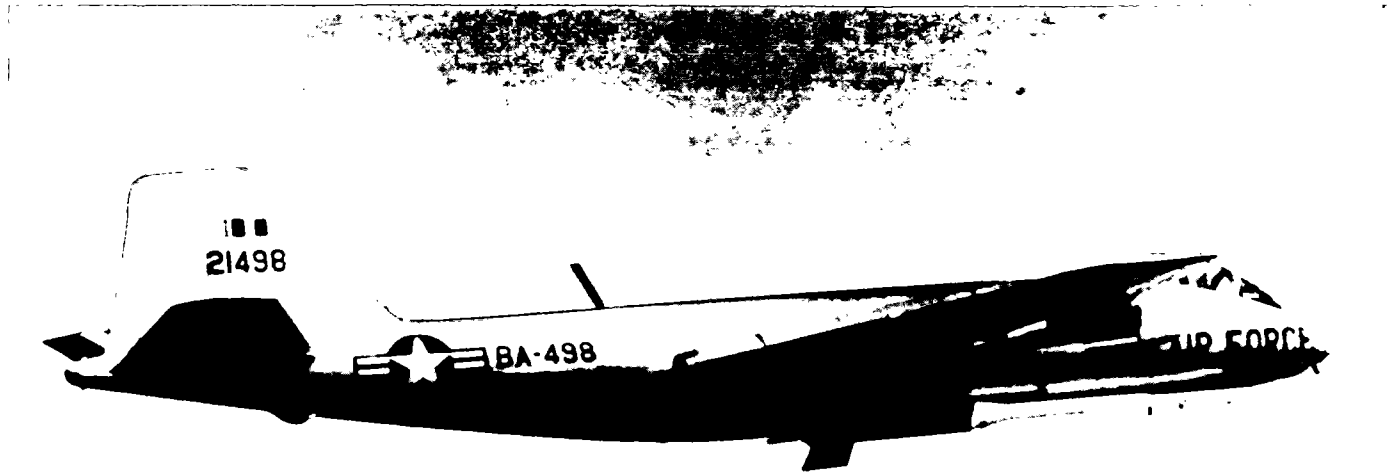
MARTIN

B-57 (USAF version of RAF Canberra)



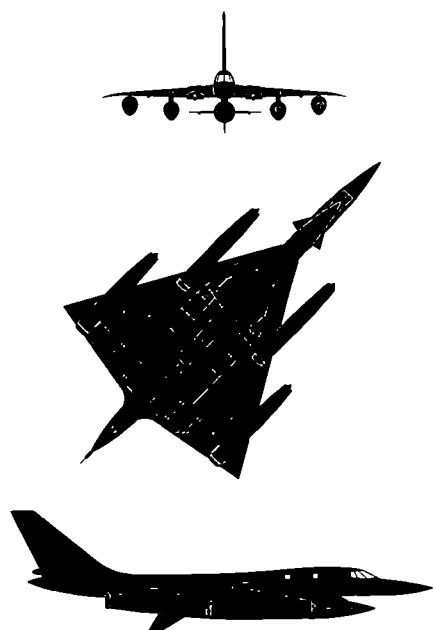
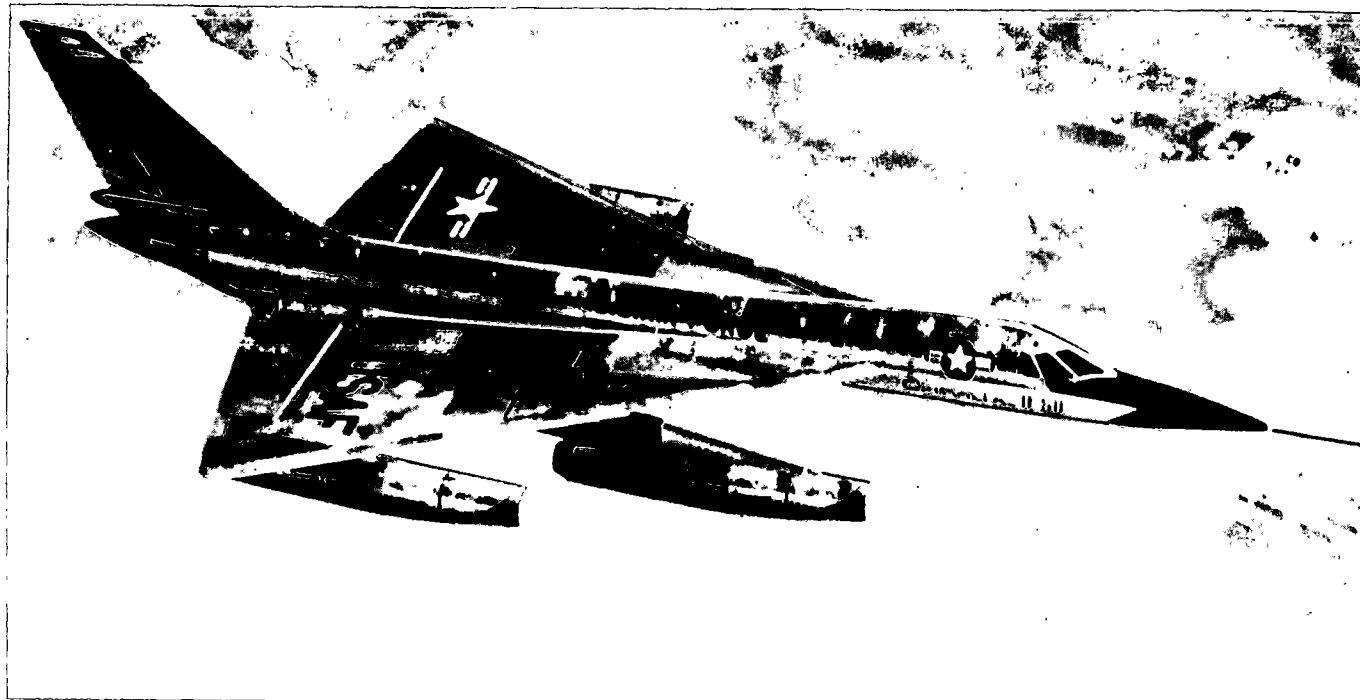
The B-57 is a midwing, day/night light bomber with twin jets. The engine nacelles are mounted outboard of the fuselage in the wing. Inboard of the engines the wing's leading and trailing edges are rectangular; beyond the engines they are equally tapered, terminating in blunt wing tips. The horizontal stabilizer is backward tapered and blunt tipped, with a straight trailing edge. The underside of the round fuselage tapers moderately from behind the wing to the tail cone. The large blunt-tipped vertical stabilizer is unequally tapered and has a short dorsal fin. Although later B-57s have a longer canopy, the B-57 and RAF Canberra are similar in appearance.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr	MARTIN	Mox Range (Naut Miles)	2,365	No of Engines	2
Wing Spon	64'	Crew No	2	Model No	J65-W-5
Length	65'6"	Mox. Speed (Knots)	520	Mfr	WRIGHT/BUICK
Combat Weight (Lbs)	38,700	Service Ceiling (Ft.)	45,100	Type	Turbojet
				Rating Each	7,220 #



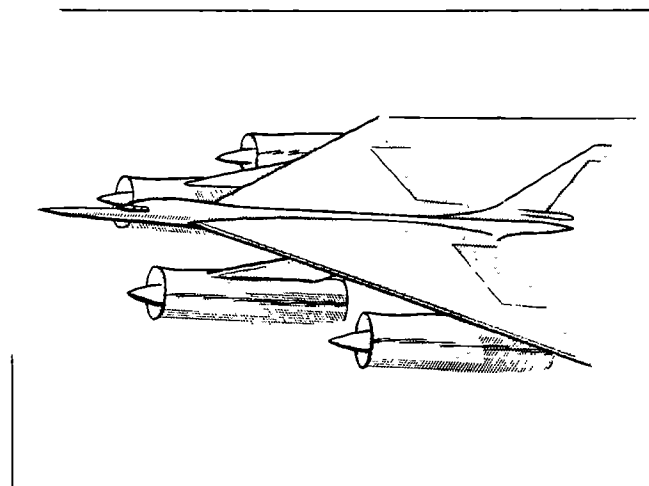
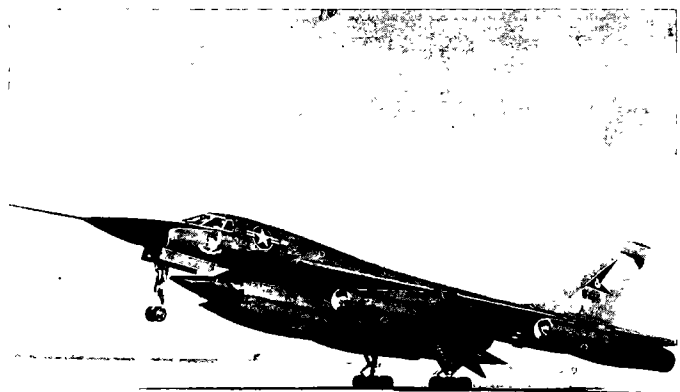
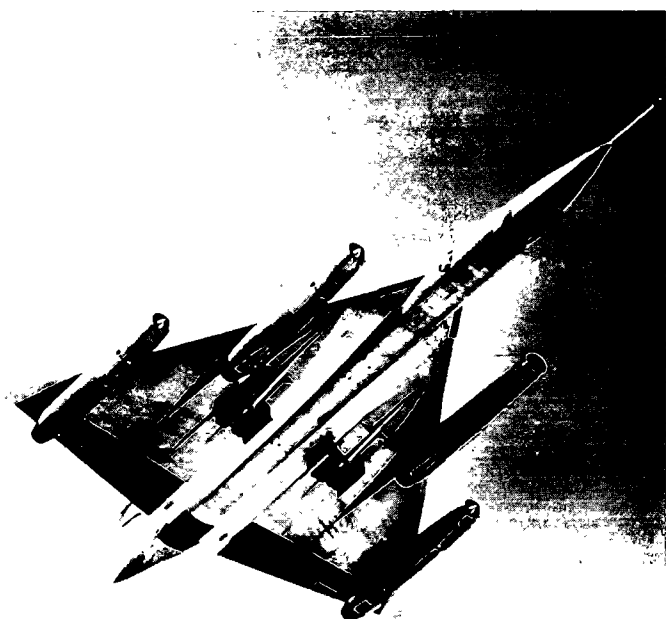
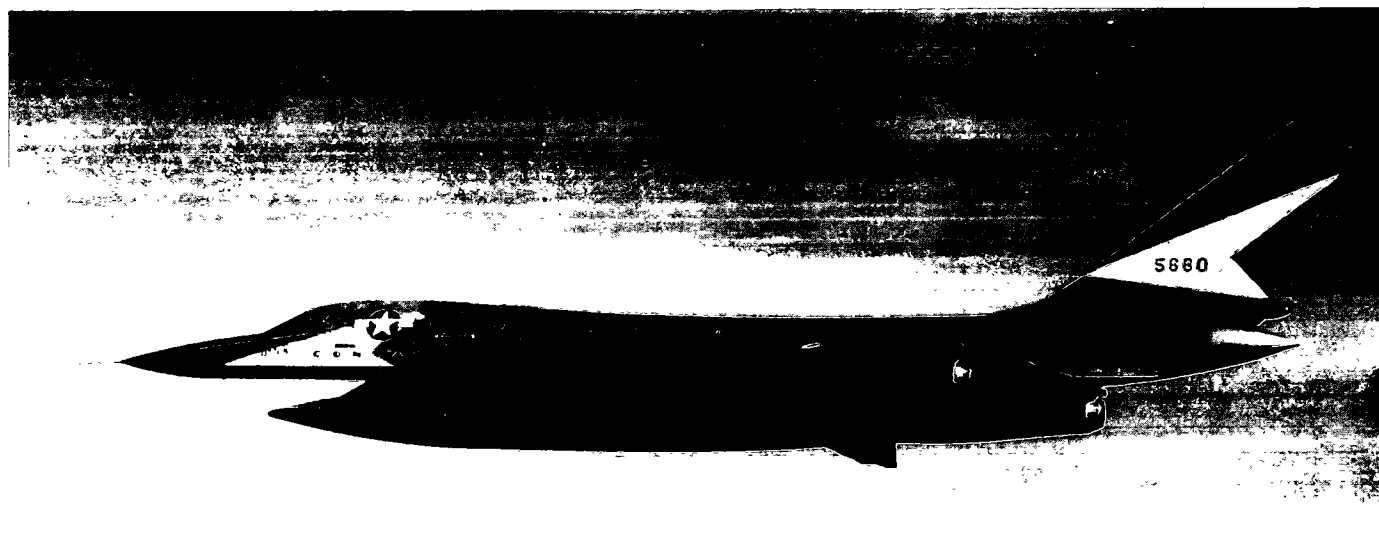
CONVAIR

B-58 HUSTLER



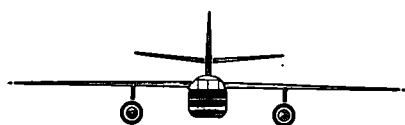
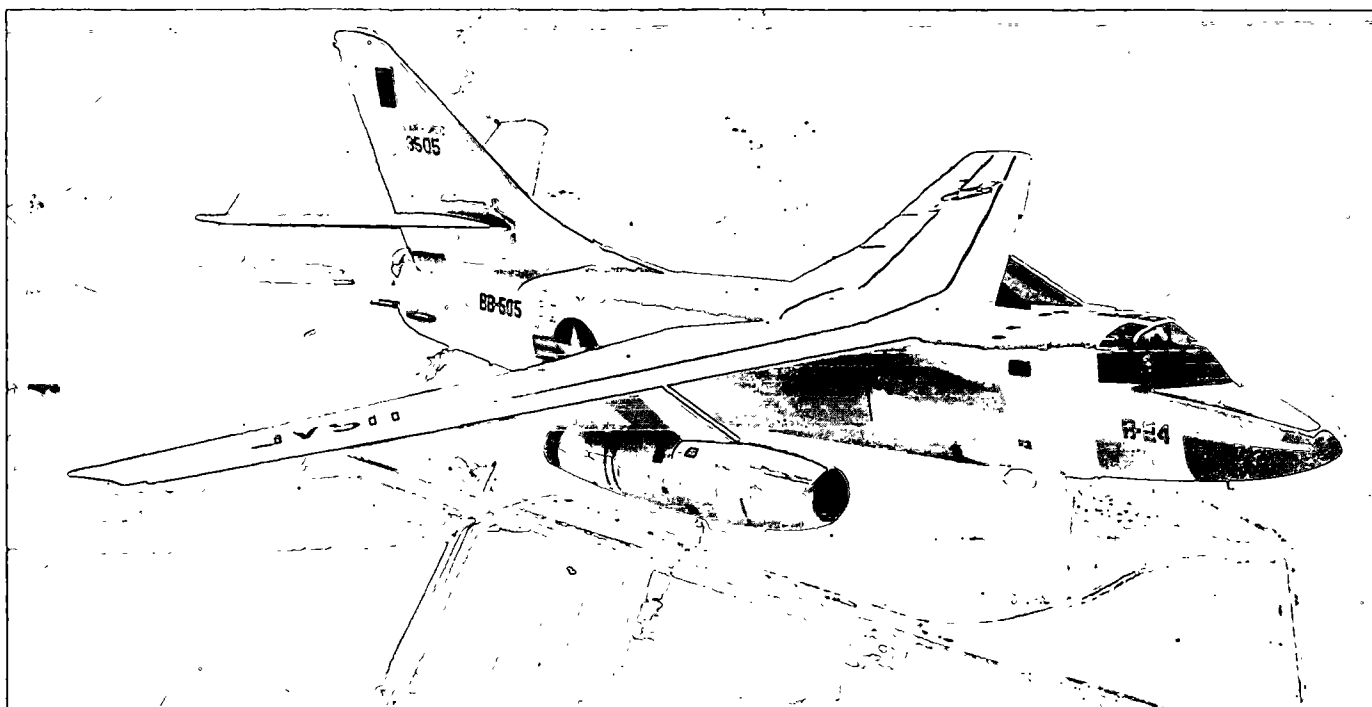
The B-58 is a four-engined, supersonic, delta wing medium bomber. Recognition features include the long slender fuselage, thin delta wings, and two jet pods mounted under each wing and extending well forward of the leading edge. A prominent hump topside on the fuselage is caused by the three separate cockpit hatches, arranged in tandem. Camber of the wing leading edge increases near the tip, creating an apparent droop. The tall vertical stabilizer has a squared-off tip. Need for a horizontal stabilizer has been eliminated by elevons in the wing trailing edge, extending from wing root fairing to outboard engine pod. A detachable streamlined under-fuselage pod can house guided and unguided nuclear weapons, electronic or reconnaissance equipment.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	CONVAIR	Max. Range (Naut. Miles)		No. of Engines	4
Wing Span	56.8'	Crew No.	3	Model No.	J-79
Length	96.8'	Max. Speed (Knots)	Mach 2	Mfr.	GE
Combat Weight (Lbs.)	82,000 approx.	Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	15,000 # approx.



DOUGLAS

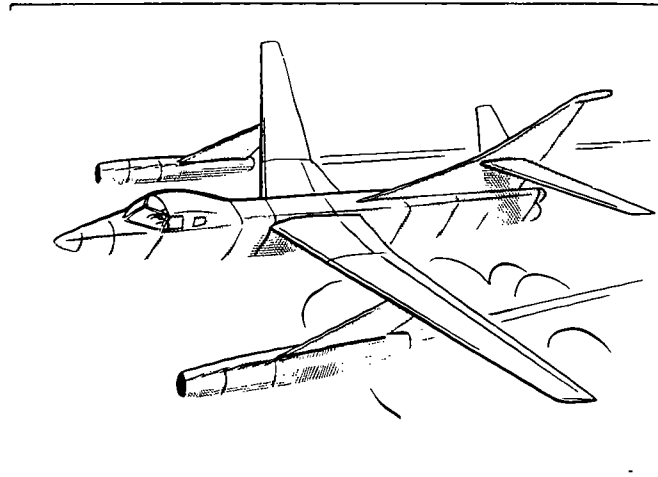
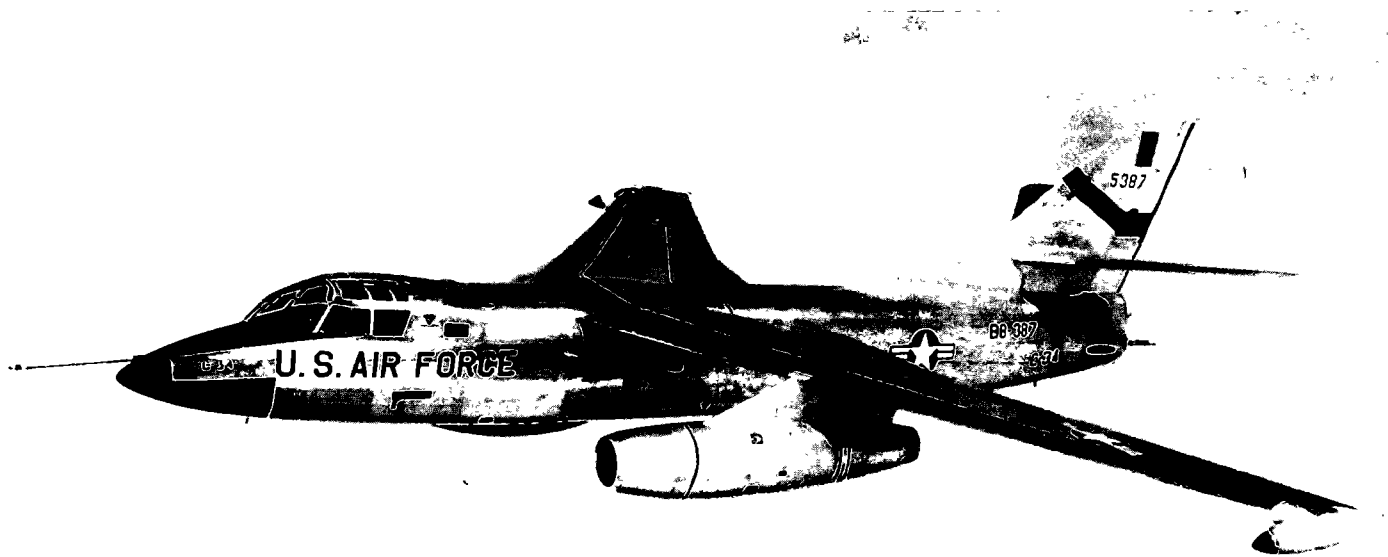
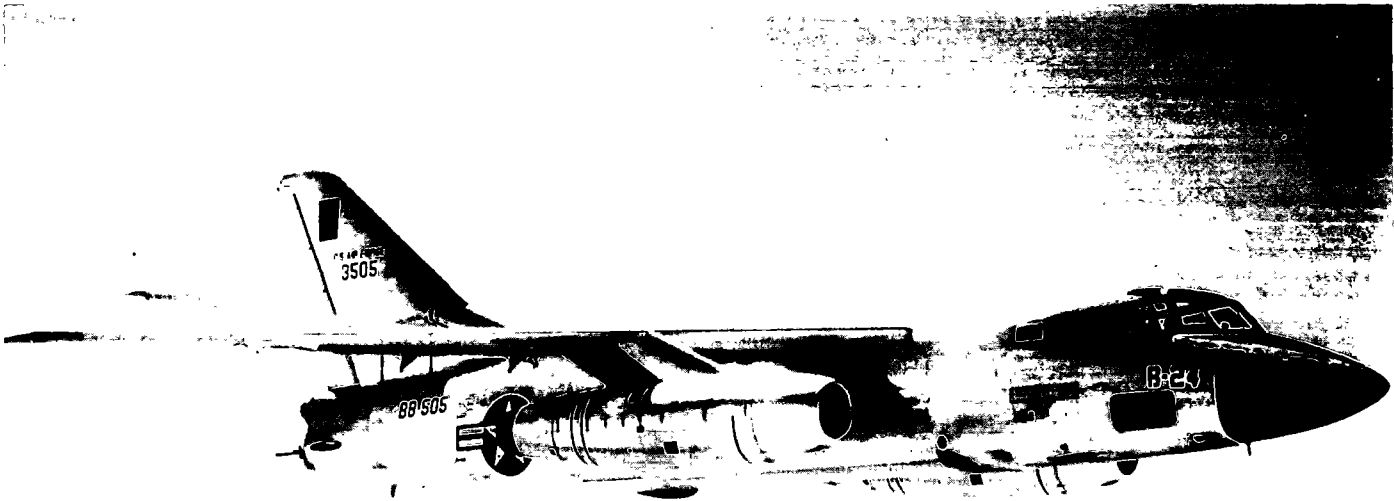
B-66 DESTROYER (USN A3D)



The B-66 is a high-performance light bomber with twin engines. The shoulder-mounted wing is swept back and tapered, with squared-off tips. Pylon-mounted engine pods slung under the wing protrude two-thirds of their length forward of the wing's leading edge. The rectangular fuselage has a pointed nose and stepped-up cockpit. The aft end houses a radar-controlled gun turret. Swept-back and tapered, the horizontal stabilizer has positive dihedral and is mounted to the sweptback, unequally tapered vertical stabilizer. Modified versions of the B-66 are operational as reconnaissance-bombers. The RB-66C version varies from this description by having wing-tip pods and a belly-mounted radome amidship.

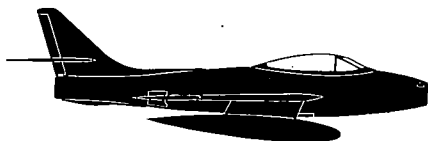
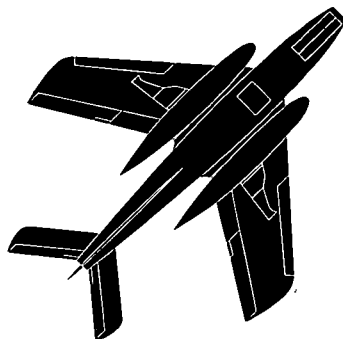
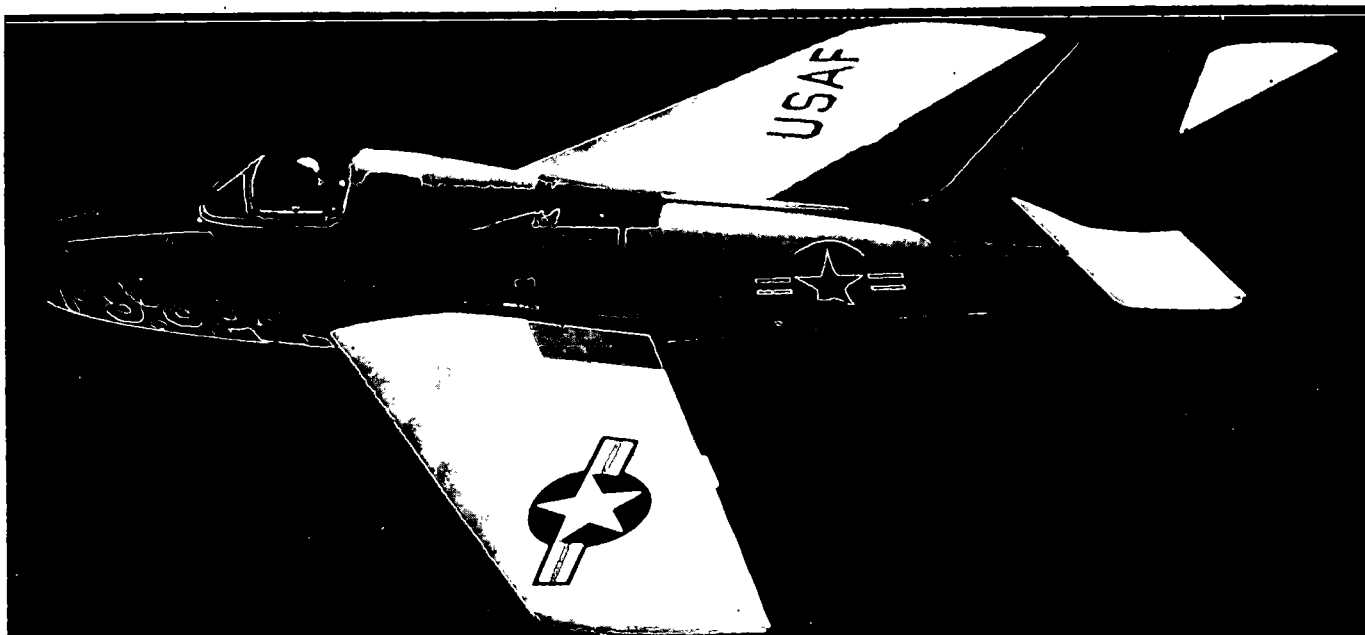
DATA APPLY TO B-66B

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DOUGLAS	Max. Range (Naut Miles)	2,144	No. of Engines	2
Wing Span	72.5'	Crew No.	3	Model No.	J-71-A-13
Length	75.2'	Max. Speed (Knots)	548	Mfr.	ALLISON
Combat Weight (Lbs.)	57,800	Service Ceiling (Ft.)	39,400	Type	Turbojet
				Rating Each	10,200 #



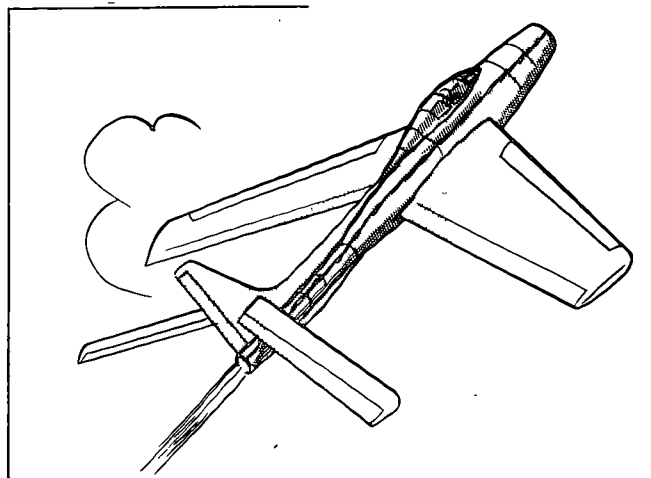
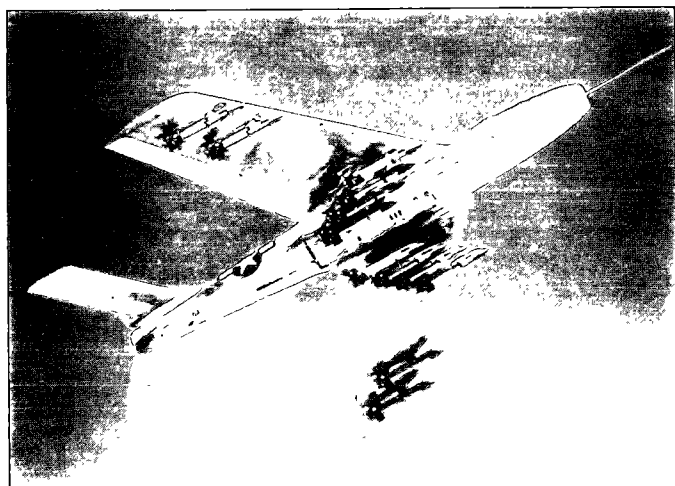
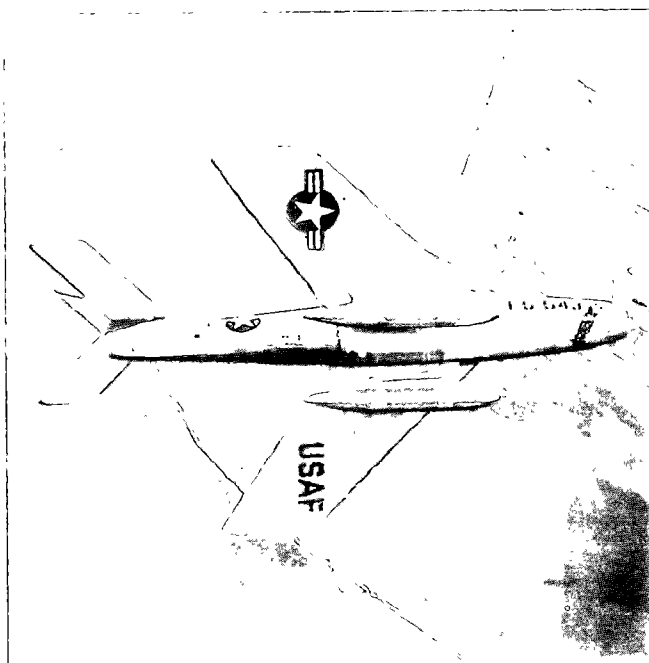
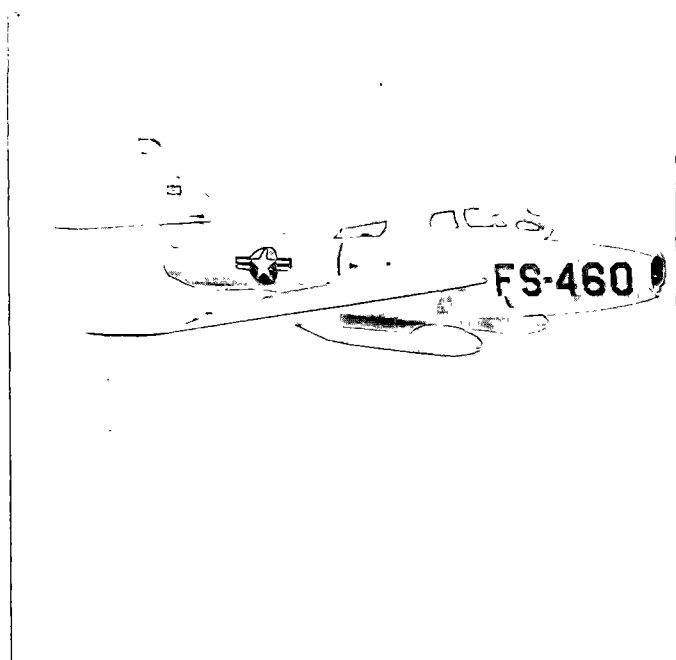
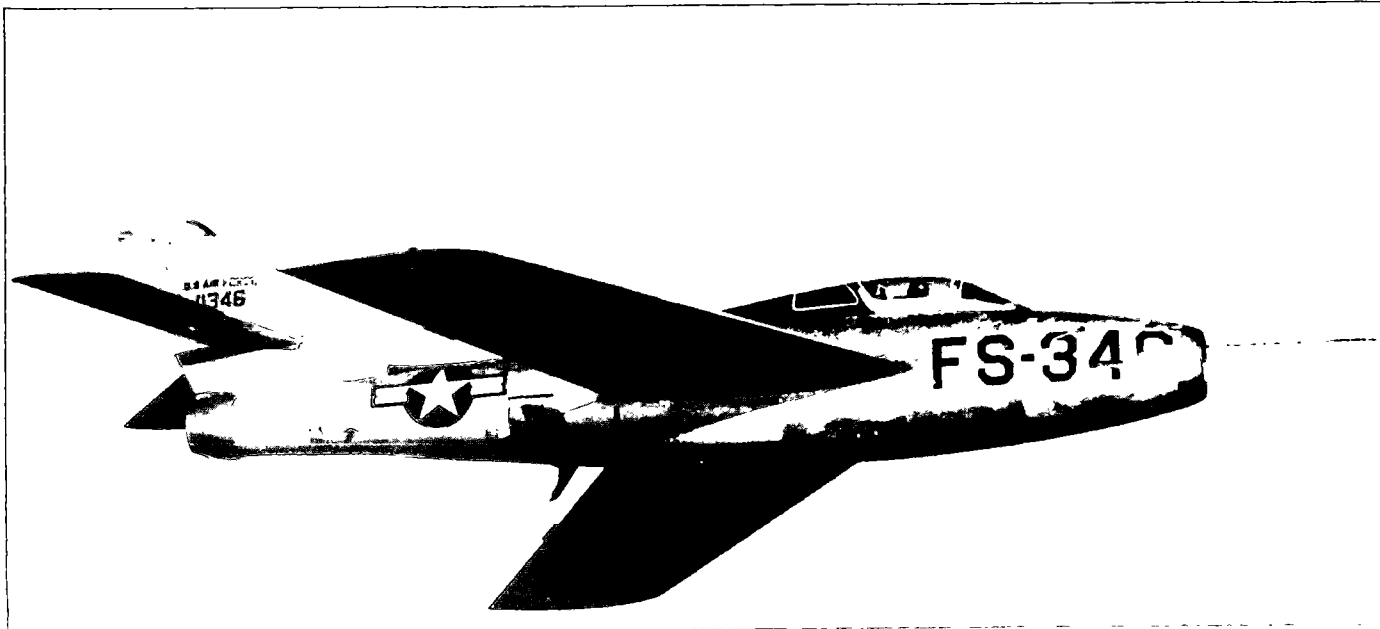
REPUBLIC

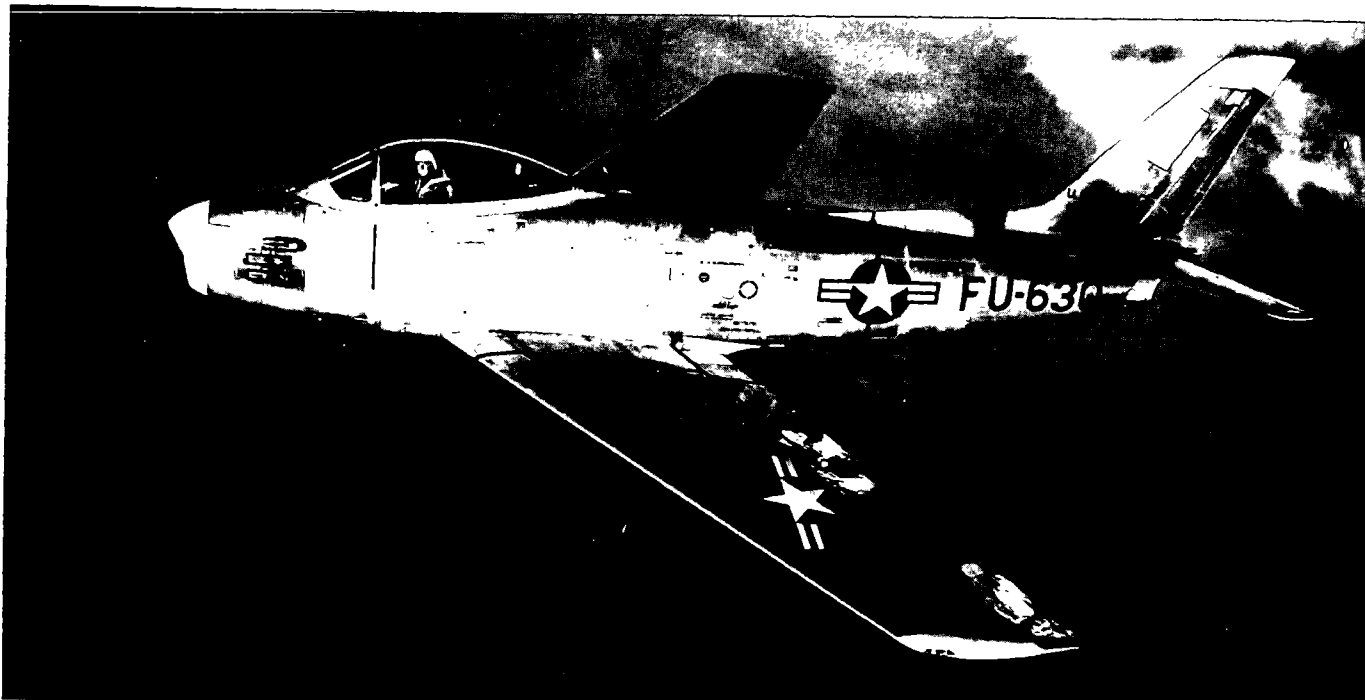
F-84F THUNDERSTREAK



The F-84F single-engine fighter-bomber has a sweptback wing and tail section. Moderate negative dihedral is apparent in the tapered, blunt-tipped wing, while the horizontal stabilizer has no dihedral. Blunt tips are also a feature of the untapered horizontal stabilizer. The vertical stabilizer is swept back and tapered, with a squared-off tip. The nose and tail cone present a blunt appearance with annular jet intake and jet outlet, respectively. A bubble-type canopy is mounted ahead on the fuselage, with the pilot seated just forward of the wing leading edge. Drop tanks may be added. This aircraft has been made available to the air forces of Belgium, France, Italy, the Netherlands, and West Germany.

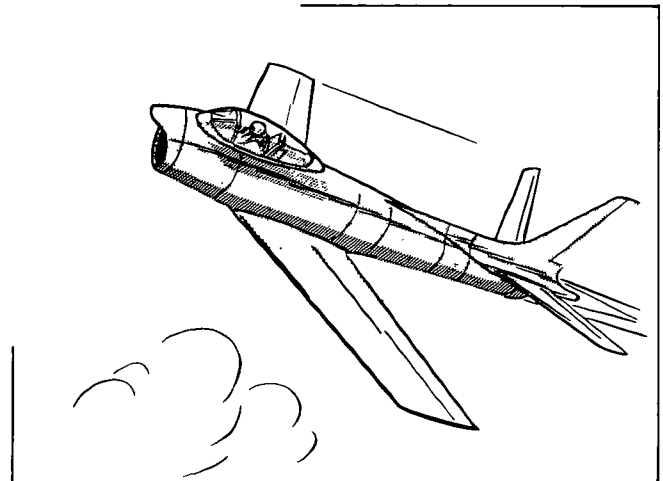
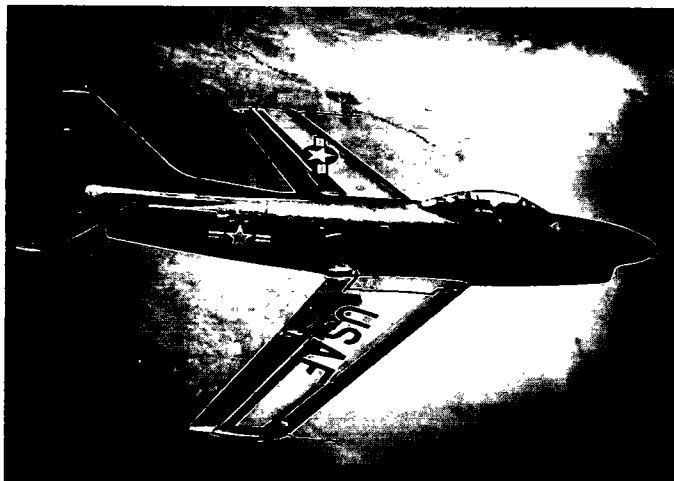
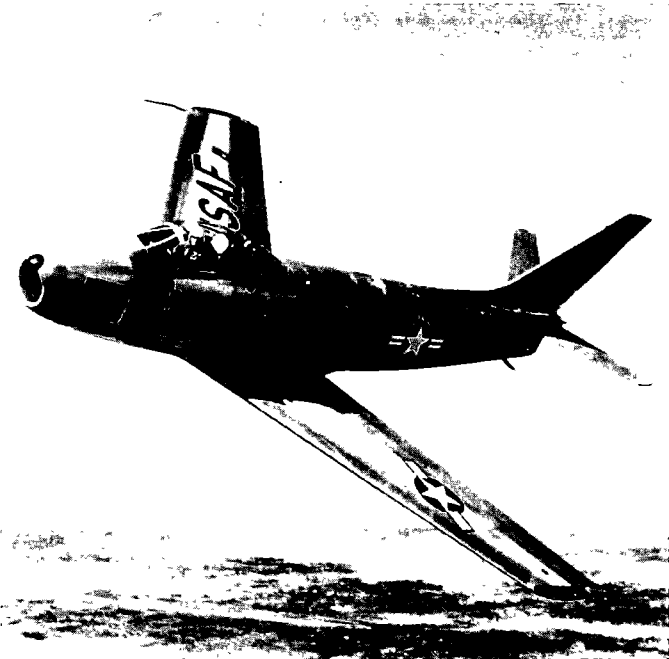
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	REPUBLIC	Max. Range (Naut. Miles)	2,035	No. of Engines	1
Wing Span	33.6'	Crew No.	1	Model No.	J-65-W-7
Length	43.4'	Max. Speed (Knots)	595	Mfr.	WRIGHT/BUICK
Combat Weight (Lbs.)	20,300	Service Ceiling (Ft.)	44,850	Type	Turbojet
				Rating Each	7,800 #

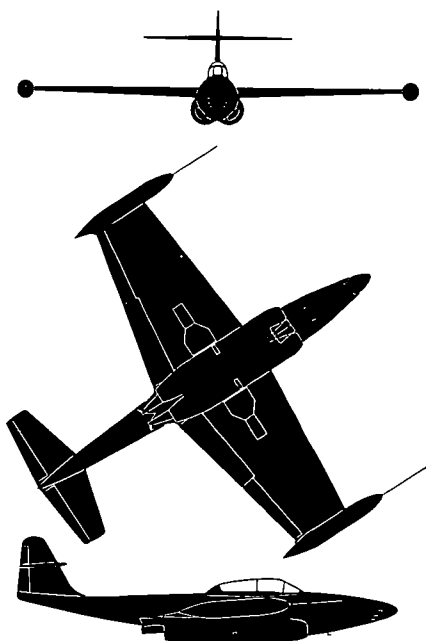




The F-86 is a single-engine jet fighter/interceptor. It was the first operational U.S. fighter designed with sweptback wing and tail surfaces. The fuselage is thick and stubby with a lipped jet intake, a bubble type canopy, and a pointed extension at the tail. Wings are low-mounted and tapered and have slightly rounded-off tips, as do the tail surfaces. Several versions of this aircraft were developed. The F and H models follow the original configuration but have wing-tip extensions and a slatted-extended leading edge. The K and L models are essentially modifications of the F-86D which for recognition purposes could be distinguished by its pointed nose and larger aft fuselage; the F-86L also has the wing-tip extensions and slatted leading edge. U.S. production of the aircraft was completed in 1956 but it continued in production in other countries, notably Canada and Australia.

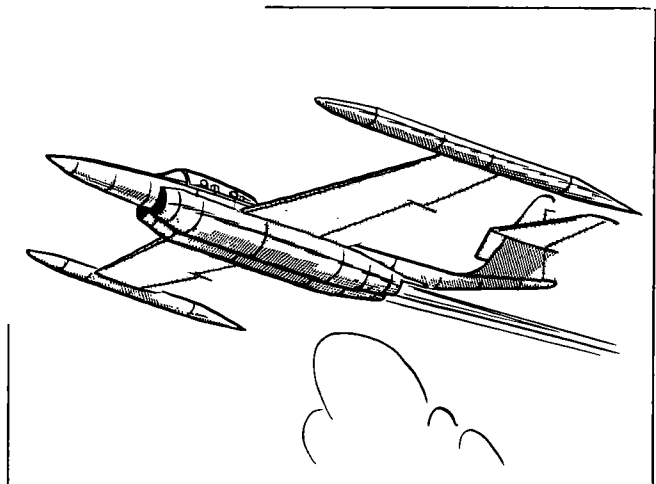
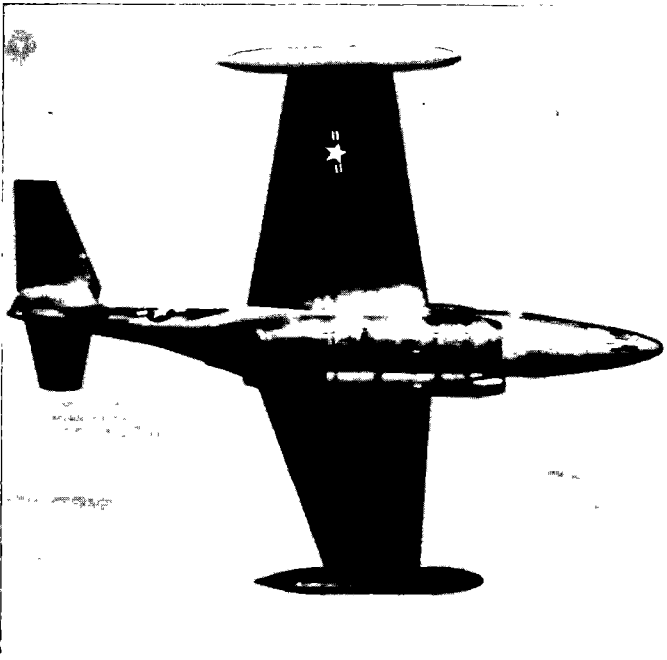
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	NORTH AMERICAN	Max. Range (Naut. Miles)	1,325	No. of Engines	1
Wing Span	39.1'	Crew No	1	Model No	J-47-GE-27
Length	37.5'	Max Speed (Knots)	589	Mfr.	GE
Combat Weight (Lbs.)	15,680	Service Ceiling (Ft.)	44,300	Type	Turbojet
				Rating Each	5,910 #

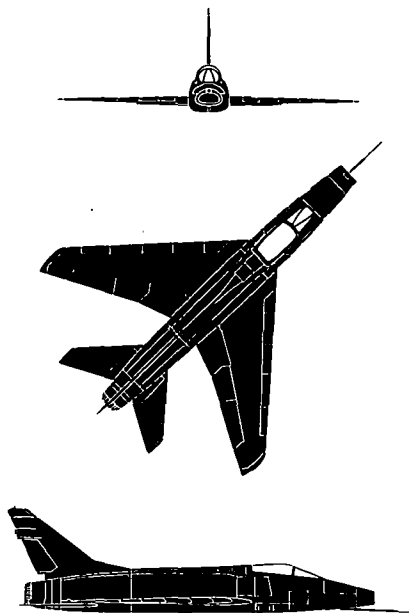
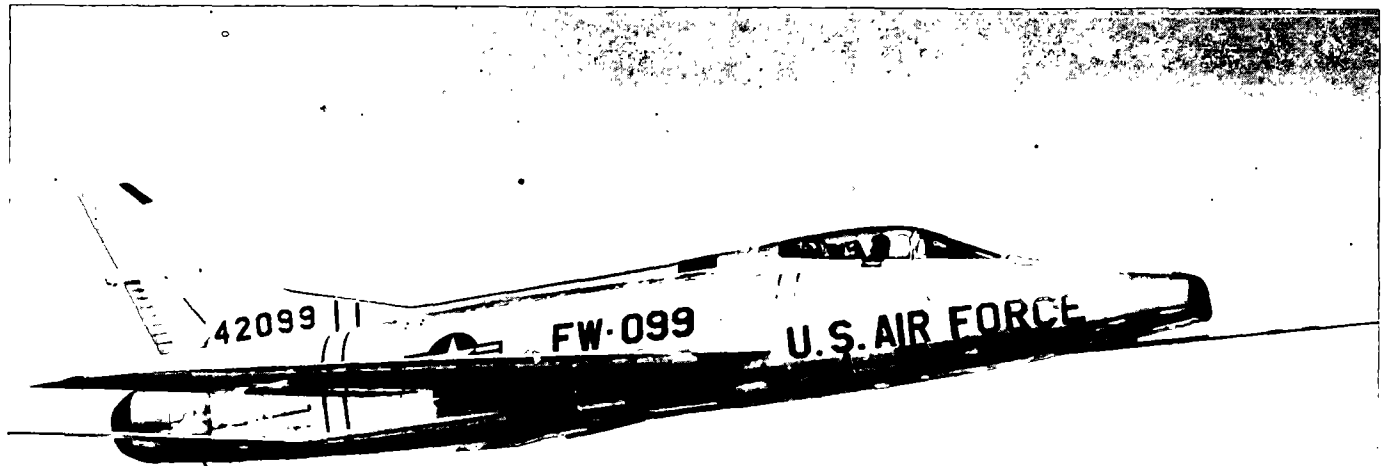




The F-89 is a two-place (tandem), all-weather interceptor powered by two turbojet engines. Midmounted high on the fuselage, the thin wing has no dihedral, an unequal forward taper, and squared-off tips. (Some versions of the F-89 have wing-tip fuel tanks while others have wing-tip rocket and/or guided missile pods.) The pointed-nose fuselage tapers and thins considerably behind the wing. The horizontal stabilizer, with its squared-off tips, unequal backward taper, and no dihedral, is mounted high on the tapered, round-tipped vertical stabilizer. The large underfuselage engine section is a distinctive feature of this aircraft.

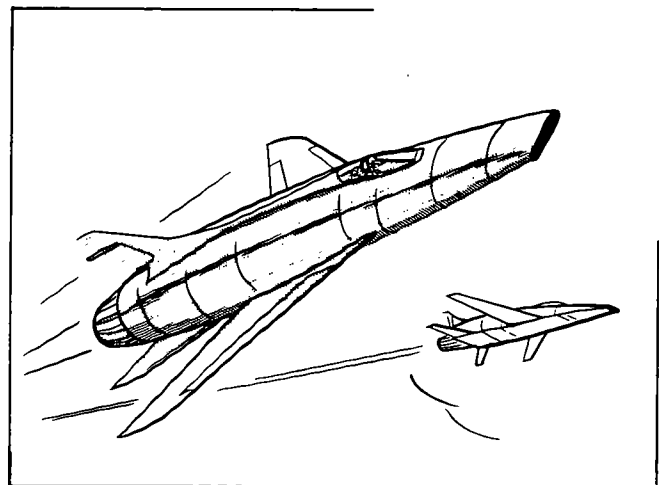
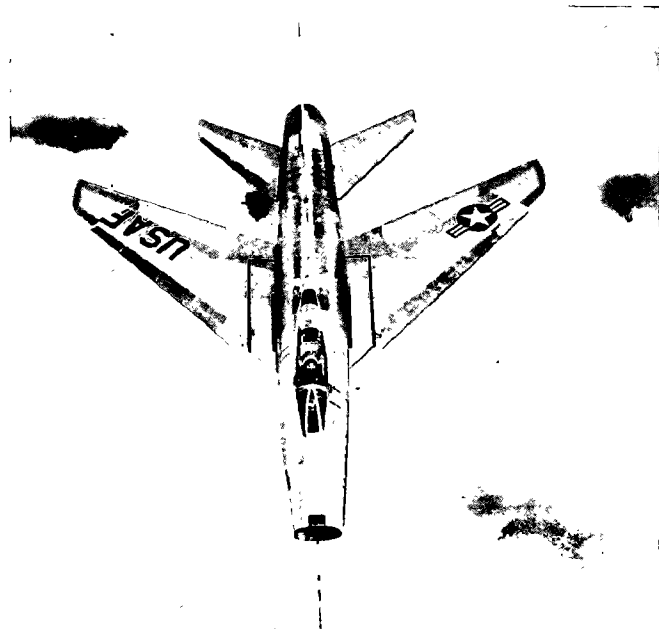
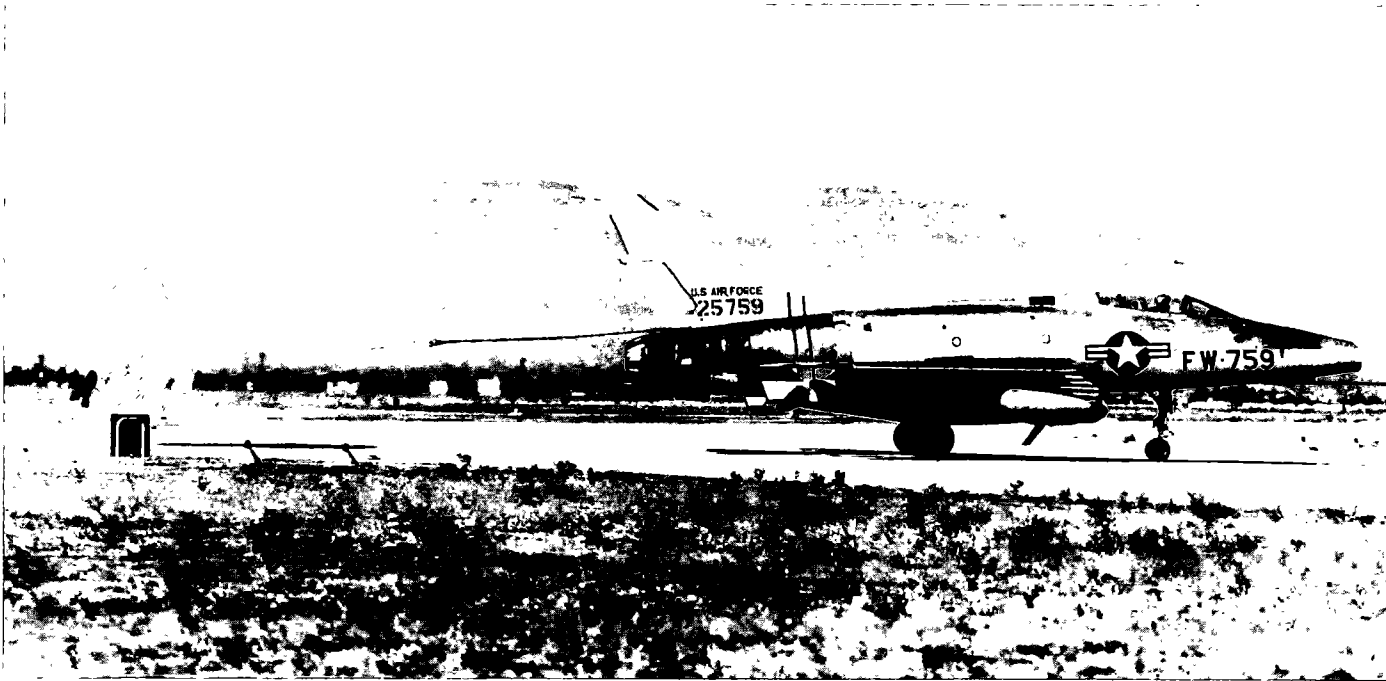
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	NORTHROP	Max. Range (Naut. Miles)	1,000 plus (F-89H)	No. of Engines	2
Wing Span	59.7'	Crew No.	2	Model No.	J-35
Length	53.8'	Max. Speed (Knots)	450 plus	Mfr.	ALLISON
Combat Weight (lbs.)	36,000 approx.	Service Ceiling (Ft.)	49,000 approx.	Type	Turbojet
				Rating Each	5,500# plus 1,700# A.B.

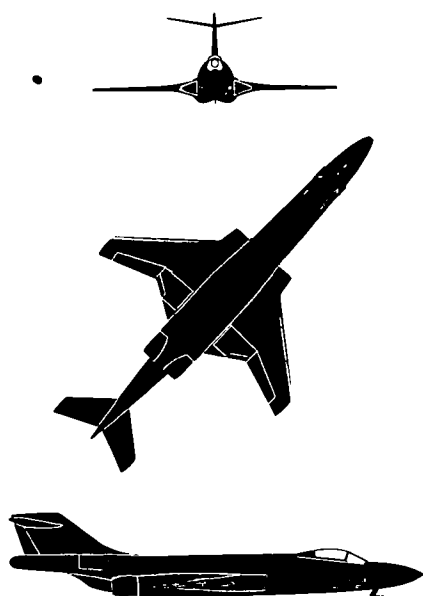
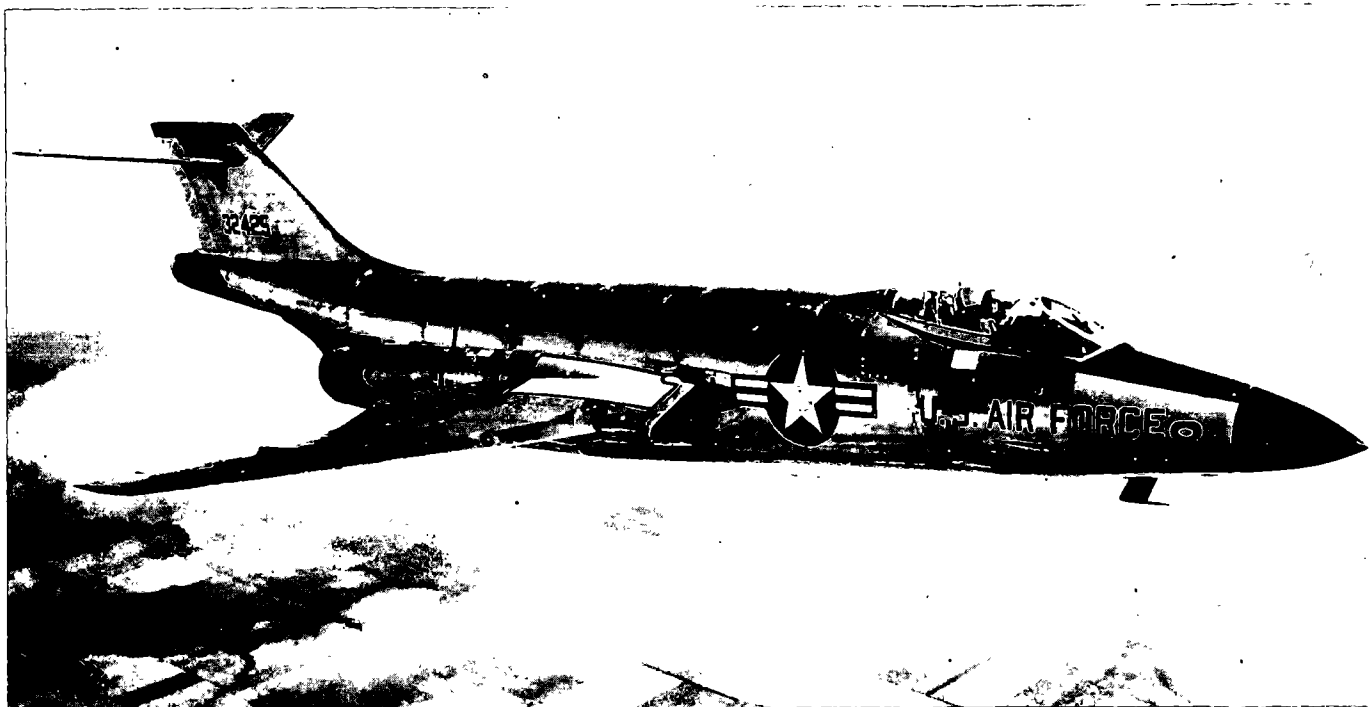




The F-100 is a single-seat, single-jet supersonic fighter. Developed from the smaller F-86 Sabre, the F-100 has a wing which is sharply sweptback (45°), tapered, and blunt tipped. The low midmounted wing is set with no dihedral. The wing tips extend behind the leading edge of the horizontal stabilizer. An oval air intake and rounded-off afterburner are easily recognizable features of the fuselage. The horizontal stabilizer, with no dihedral, is mounted to the underside of the aft fuselage. This "flying-tail-type" stabilizer is sweptback and tapered (taper of leading edge duplicates taper of wing leading edge), with blunt tips. A dorsal spine and dorsal fin fairing are incorporated with the sweptback, tapered, square-tipped vertical stabilizer. The low-set cockpit adds to the overall clean appearance of the F-100.

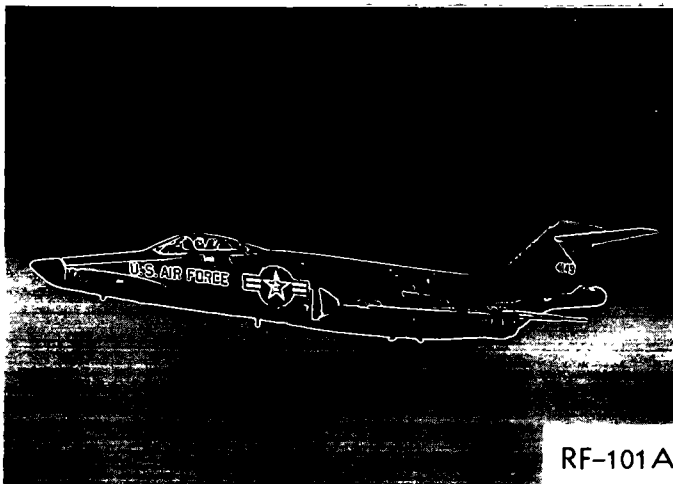
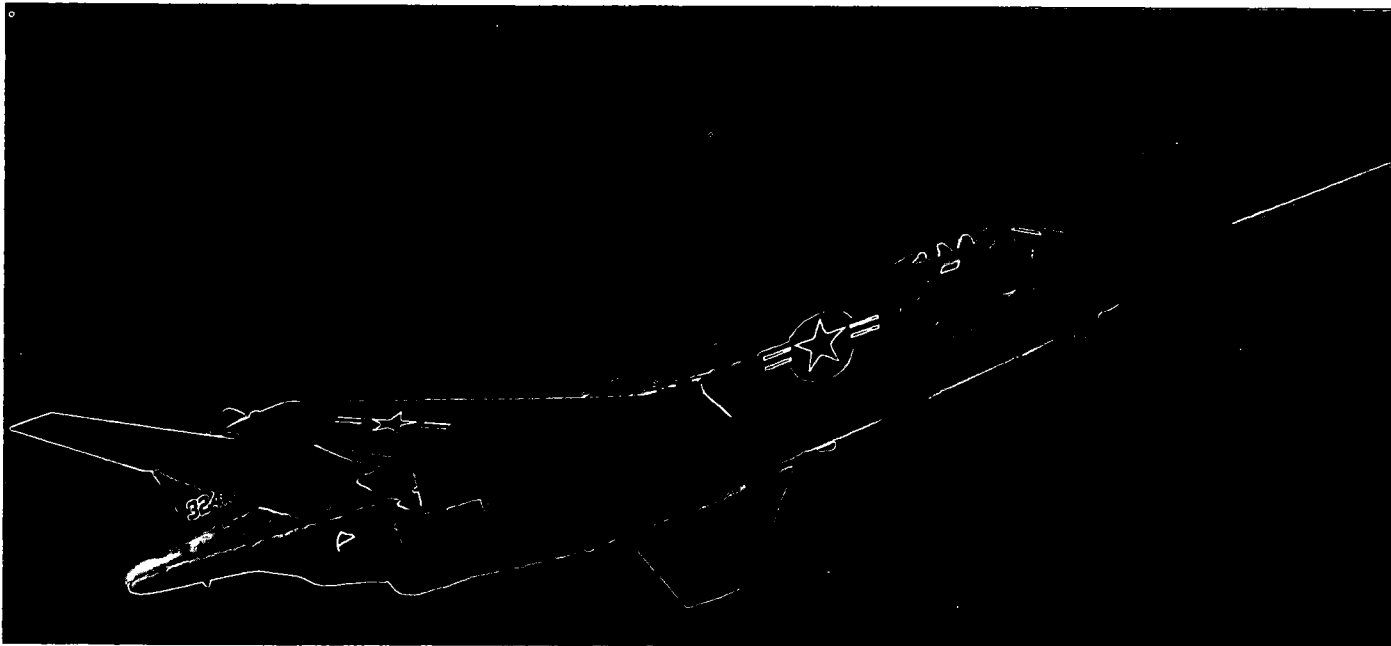
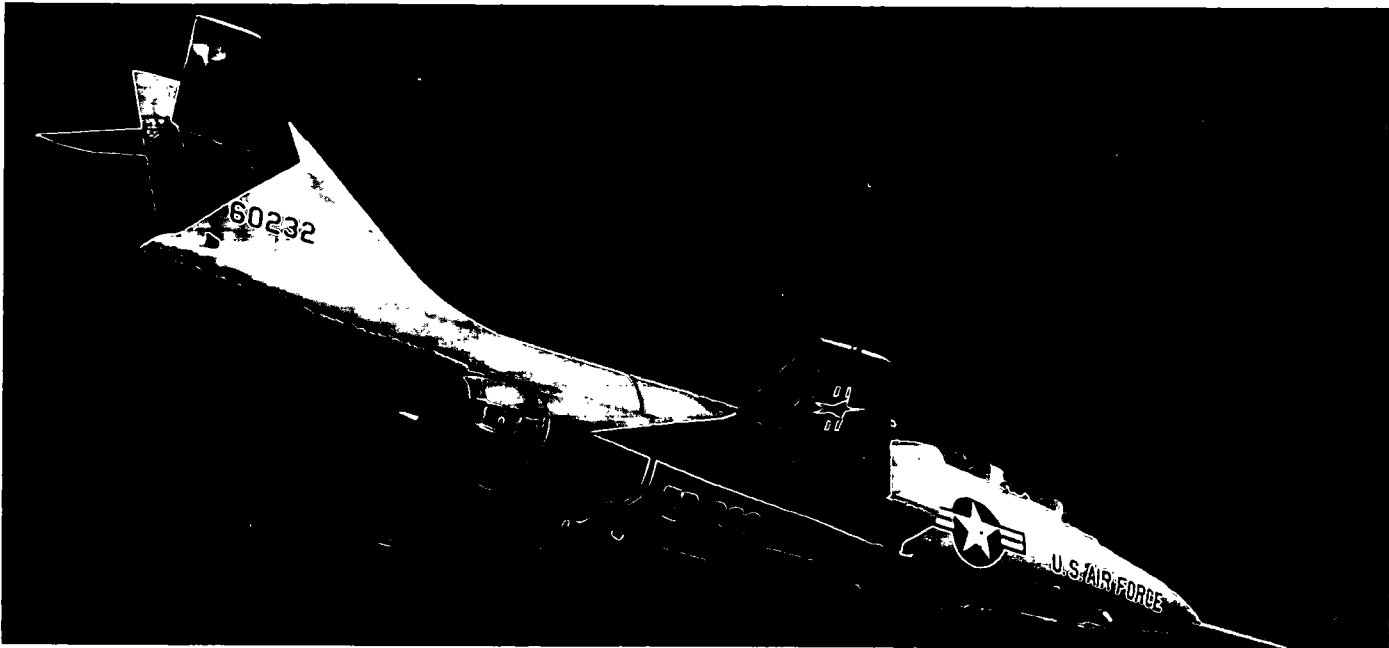
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	NORTH AMERICAN	Max. Range (Naut Miles)	1,200 plus	No. of Engines	1
Wing Span	38.6'	Crew No.	1	Model No.	J-57-P-21
Length	47.6'	Max. Speed (Knots)	800 approx.	Mfr.	P & W
Combat Weight (Lbs.)	29,000 approx.	Service Ceiling (Ft.)	48,000 approx.	Type	Turbojet
				Rating Each	10,200 # plus 5,800 # A.B.



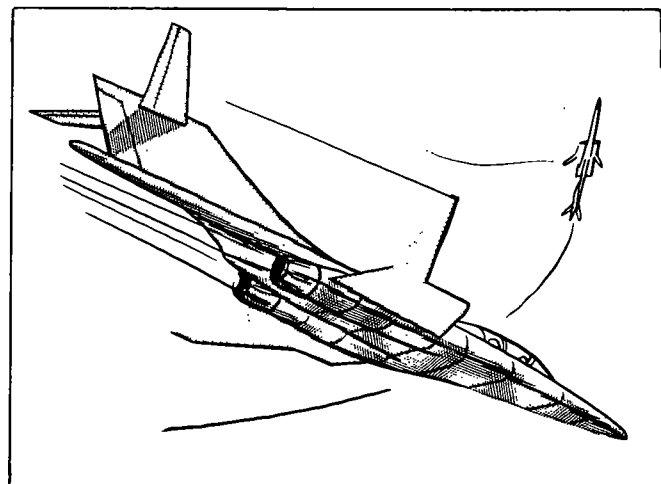


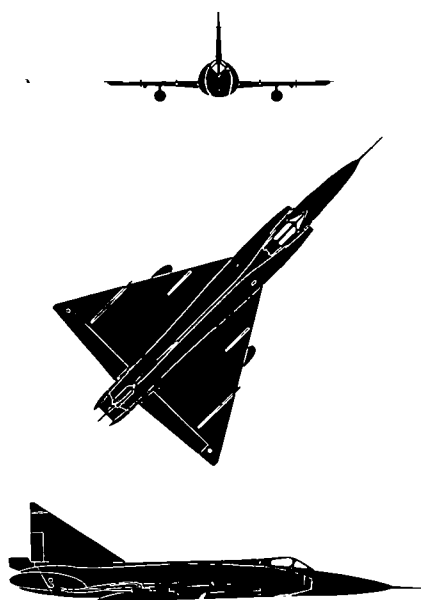
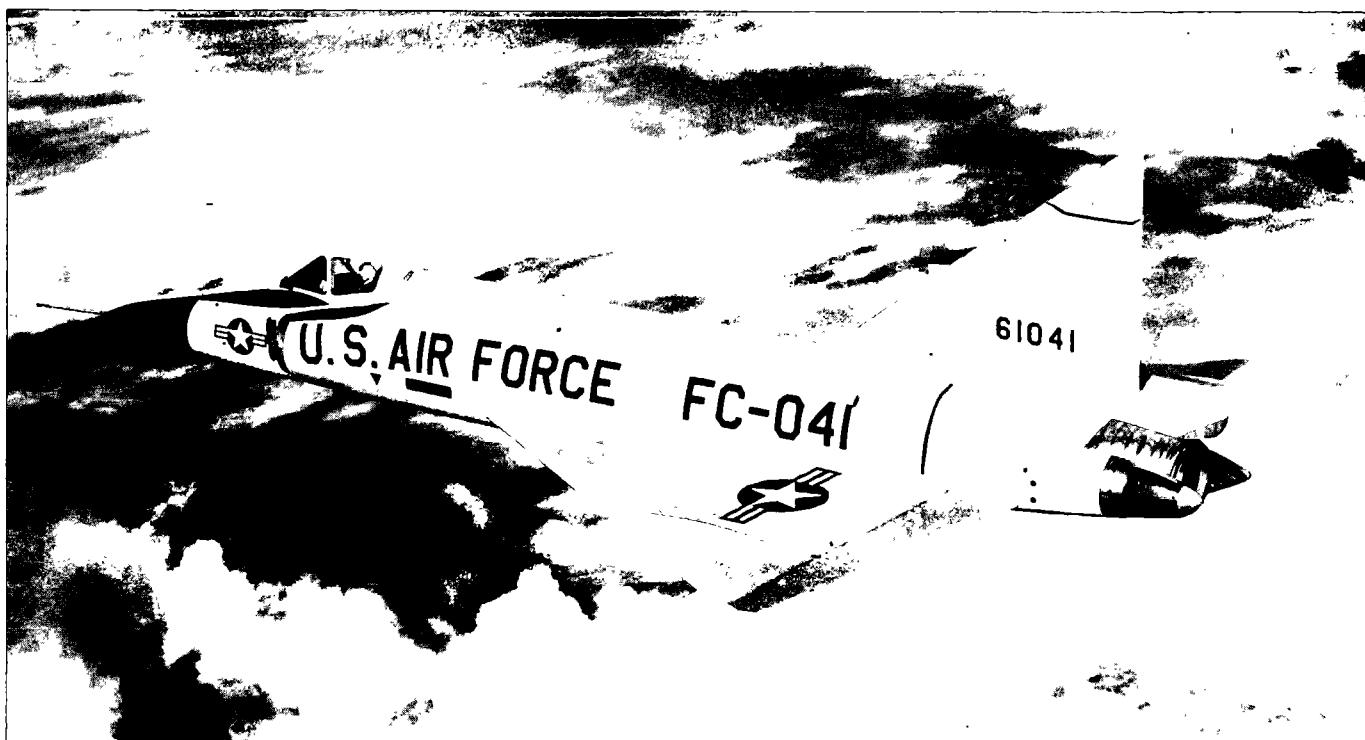
The F-101A was originally designed as a low-midwing, twin-jet, long-range fighter-interceptor. Distinctive in appearance, the thin, stubby wing has no dihedral, is back swept, and is both backward and forward tapered along the trailing edge, giving it an overall reverse-W shape. The twin engines are mounted at the wing roots, with their squared-off intakes protruding considerably forward of the wing's leading edge. A ventral fin fairing divides the exhaust outlets of the twin belly-mounted engines. The long, pointed fuselage has a bubble-type canopy on the cockpit which is forward mounted. The fuselage thickens through the engine area, then thins and tapers moderately upward, ending aft as a blunt tail cone. A "flying-tail-type" horizontal stabilizer with moderate dihedral is mounted high on the large-area vertical stabilizer which is stubby, sweptback, and squared off. A tandem two-seat version designated F-101B, a single seat fighter-bomber designated F-101C, and a reconnaissance version, the RF-101A, are also operational.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	McDONNELL	Max. Range (Naut.Miles)	1,000 plus	No. of Engines	2
Wing Span	39.7'	Crew No.	1	Model No.	J-57
Length	67.4'	Max. Speed (Knots)	870 approx.	Mfr.	P & W
Combat Weight (Lbs.)	40,000 approx.	Service Ceiling (Ft.)	48,000 approx.	Type	Turbojet
				Rating Each	10,200# plus 5,800# A.B.



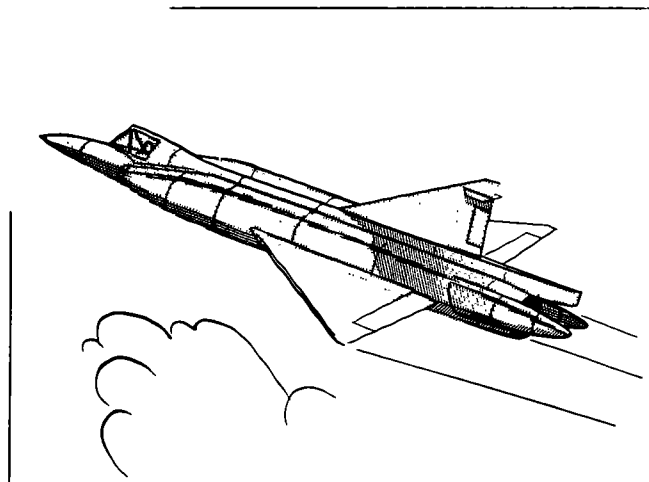
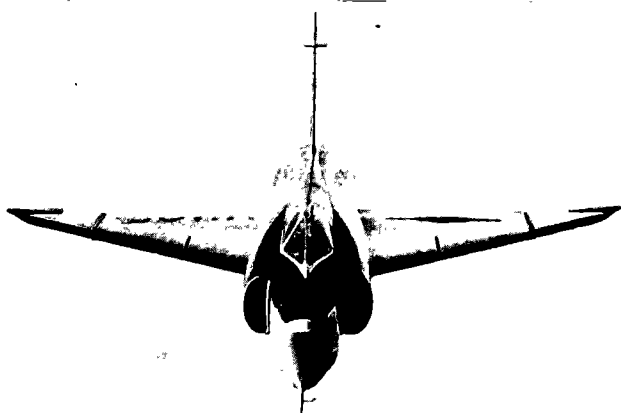
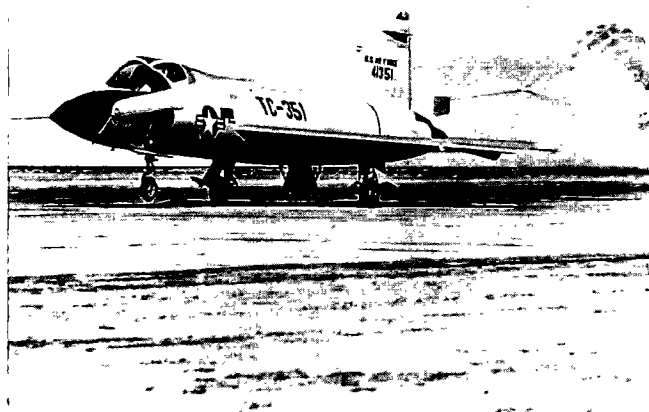
RF-101A

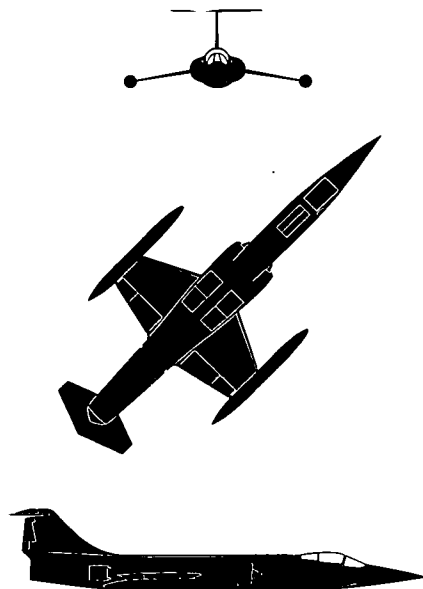
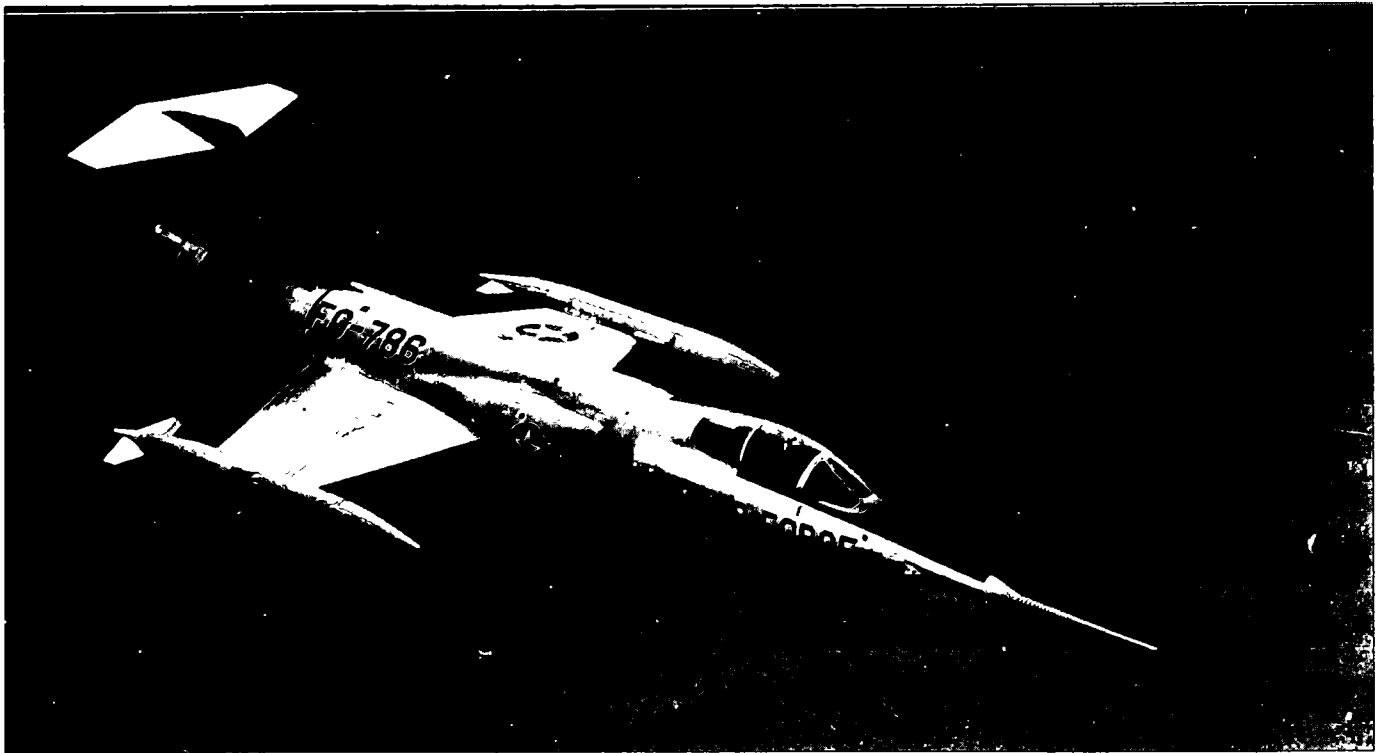




The F-102 is a supersonic, delta wing, single-seat all-weather interceptor. Its fuselage is sharp nosed, long, and narrow-waisted, following area rule. Other fuselage recognition features include a stepped-up cockpit, with angular canopy blending into a long dorsal spine extending to the vertical stabilizer. The single jet engine's two air intakes flank the forward fuselage on a line with the cockpit. The trailing edge of the low mid-mounted wing tapers slightly forward. The large triangular vertical stabilizer has a straight and vertical trailing edge. There is no horizontal stabilizer; elevons in the wing provide necessary stabilization. At the aft end of the fuselage, there is an elliptical streamlined fairing on each side of the exhaust outlet and protruding slightly beyond it. Atop the tail cone and extending from the stabilizer root, forward-opening speed brakes are located. Primary armament consists of six Falcon air-to-air missiles. The F-102B, an extensively redesigned version of this aircraft, eventually was redesignated the F-106. A two-seat trainer version, the TF-102A, generally resembles the tactical aircraft but is reduced about 5 feet in length.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	CONVAIR	Max Range (Naut. Miles)	950 plus	No. of Engines	1
Wing Span	38.1'	Crew No.	1	Model No.	J-57-P-23
Length	68.3'	Max. Speed (Knots)	680 approx.	Mfr.	P & W
Combat Weight (Lbs.)	25,000 approx.	Service Ceiling (Ft.)	52,000 approx.	Type	Turbojet
				Rating Each	10,200# plus 5,800# A.B.



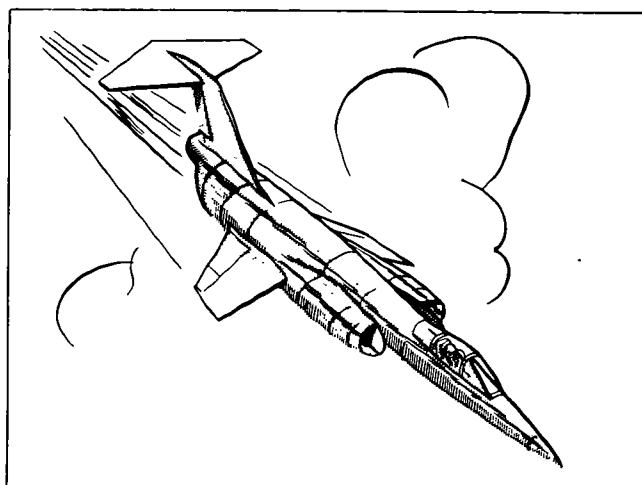
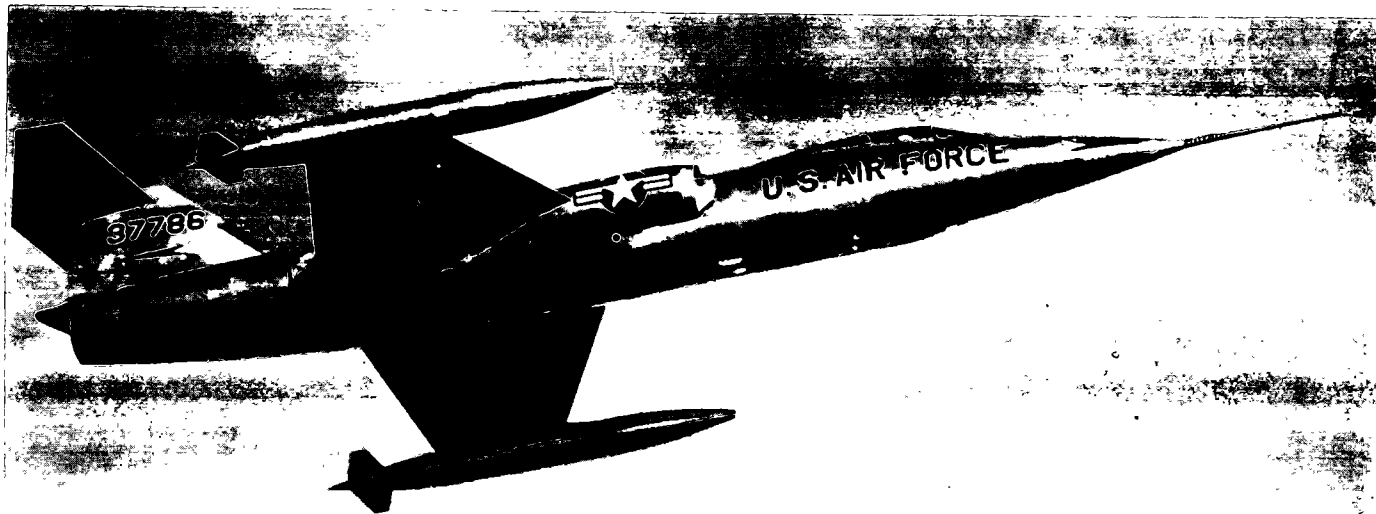


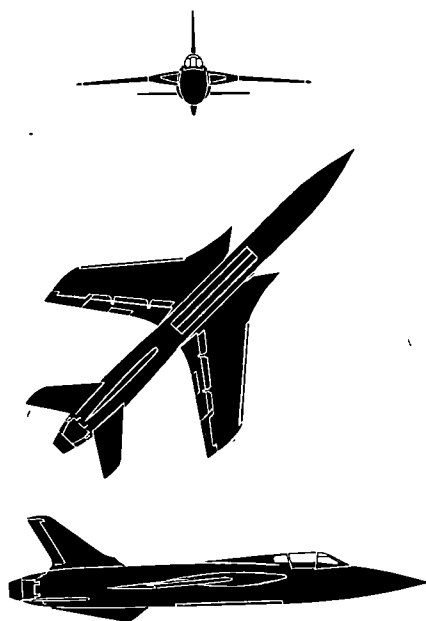
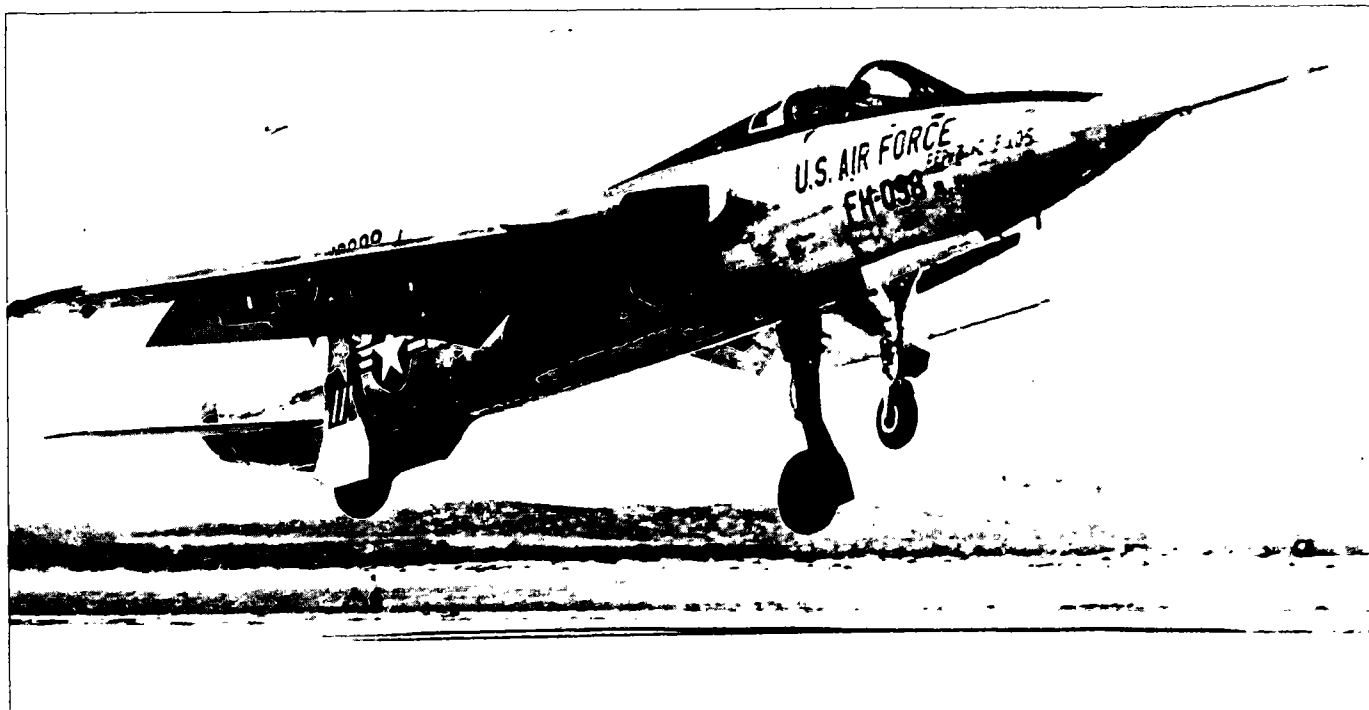
The F-104 is a high-performance, single-jet, supersonic fighter with an unmistakable configuration. Its razor-thin wing is extremely stubby, almost equitapered, and square tipped. It is midmounted and has a sharp negative dihedral. The needle-nosed fuselage with its bubble canopy thickens considerably at the air intakes, then tapers aft to the exhaust outlet. The air intakes are positioned on either side of the fuselage, well forward of the wing's leading edge. The "flying-tail-type" horizontal stabilizer is broad, equitapered, and square tipped and has no dihedral. It is mounted high near the tip of the large, tapered vertical stabilizer. Droppable wing-tip and/or underwing-pylon-mounted fuel tanks may be carried. The B and D versions of the F-104 are tandem two-seaters.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	LOCKHEED	Max. Range (Naut Miles)		No of Engines	1
Wing Span	21.9'	Crew No	1	Model No.	J-79-GE-7
Length	54.8'	Max. Speed (Knots)	Mach 2 plus	Mfr.	GE
Combat Weight (Lbs.)	18,000 approx.	Service Ceiling (Ft)	55,000 approx.	Type	Turbojet
				Rating Each	15,000 #

F-104 STARFIGHTER

LOCKHEED

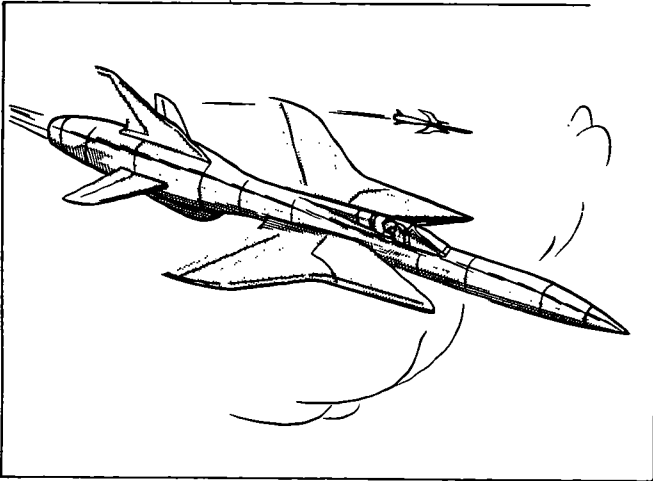
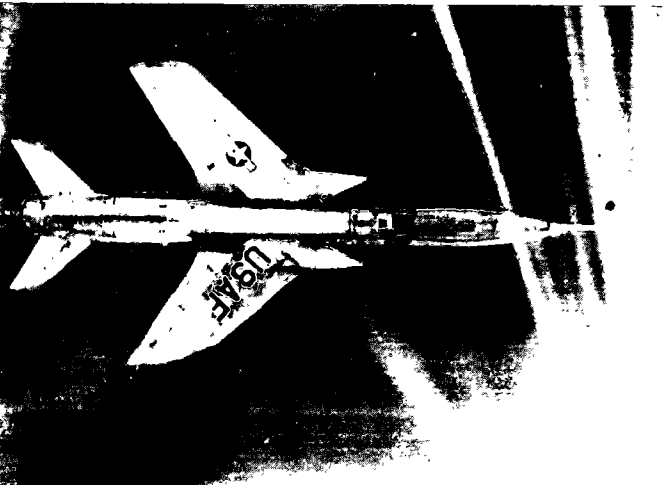




The F-105 weapons system was developed to meet USAF requirements for a supersonic, single-seat fighter-bomber capable of delivering nuclear or conventional weapons at very high speeds and over long ranges. The aircraft has highly swept wings and an elongated fuselage, area-ruled to lower drag in the transonic range. Two unique, shallow, forward-projecting engine air intake ducts are located in the forward wing root. The wing section itself is thin, with conical-cambered leading edge and both leading- and trailing-edge flaps. All tail surfaces are highly swept; the vertical stabilizer has a ram air intake in its leading edge base; the slab-type horizontal stabilizer is set low on the fuselage. The tailpipe is enclosed by four-petal speed brakes which can be opened step-by-step to an angle of about 40 degrees. A ventral fin under the rear fuselage helps to maintain stability in supersonic flight. Two pylons on the underside of each wing and one on the fuselage centerline can accommodate various external stores, including auxiliary fuel tanks, air-to-air missiles or air-to-surface missiles.

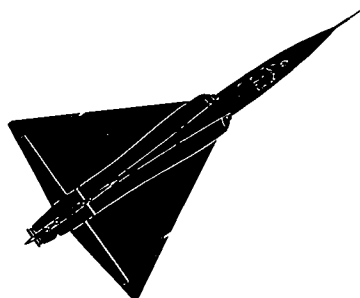
DATA APPLY TO F-105D

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	REPUBLIC	Max. Range (Naut. Miles)	2,000 approx.	No. of Engines	1
Wing Span	34'11"	Crew No.	1	Model No.	J75-P-19W
Length	64'3"	Max. Speed (Knots)	Mach 2 plus	Mfr.	P & W
Combat Weight (Lbs.)	35,200	Service Ceiling (Ft.)	50,000 approx.	Type	Turbojet
				Rating Each	26,500 #



CONVAIR

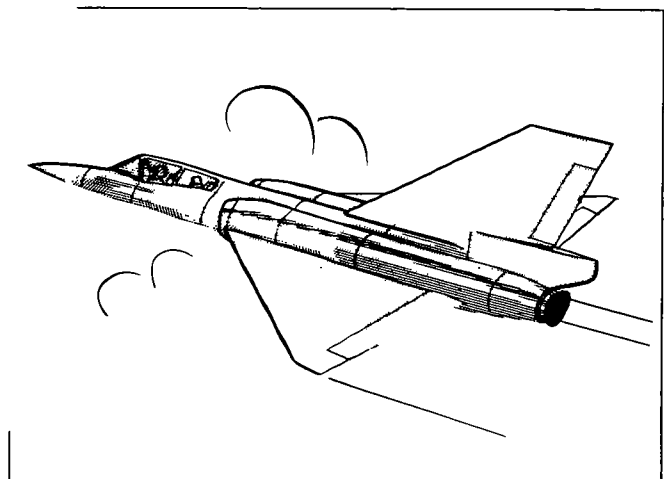
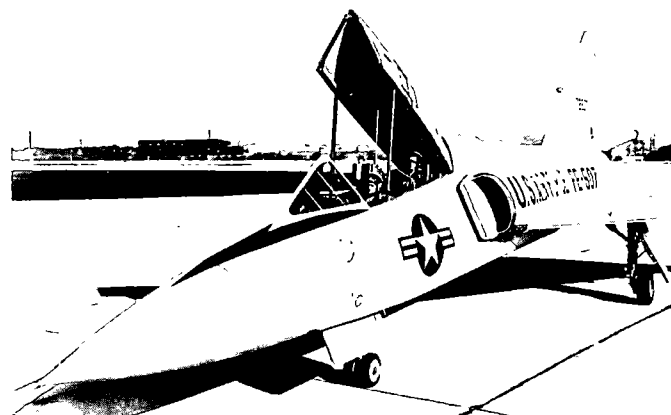
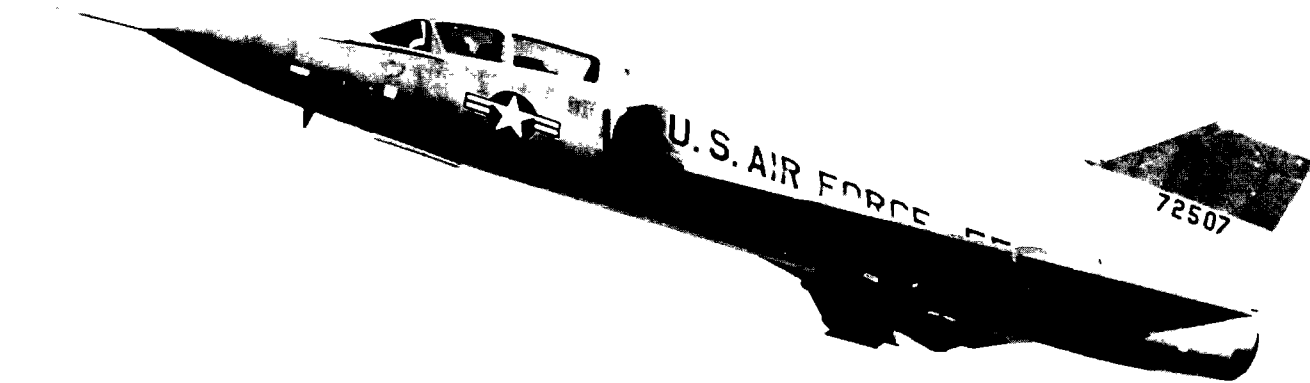
F-106 DELTA DART

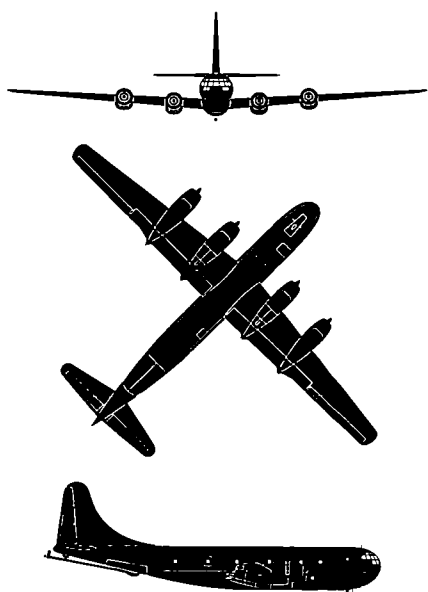
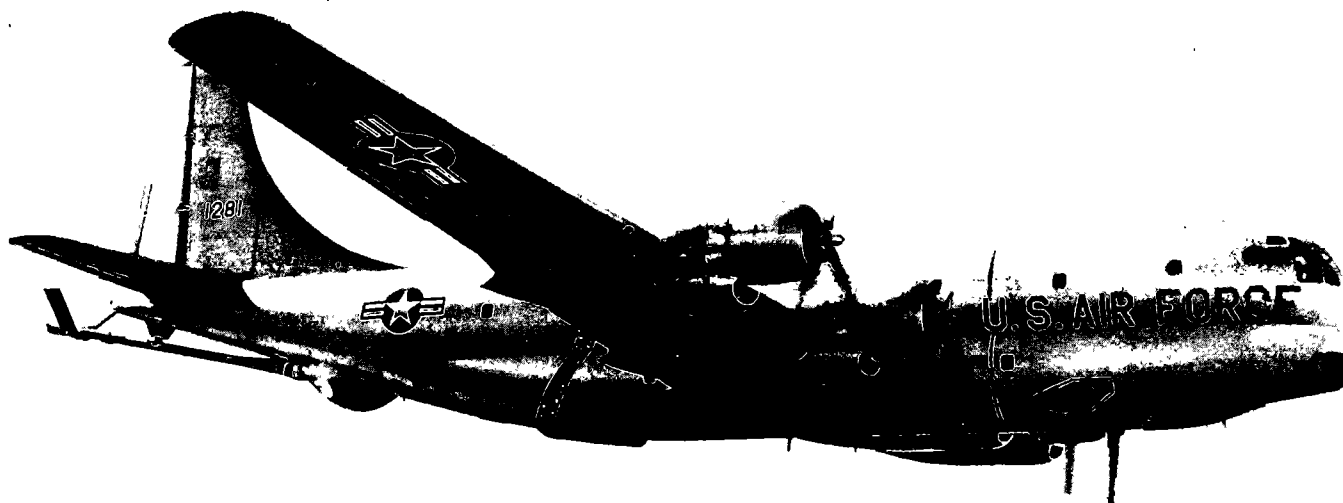


The F-106A is an advanced, supersonic, all-weather jet interceptor evolved from the F-102A. While retaining the latter's characteristic delta wing and area-ruled fuselage, the F-106 differs noticeably in its shorter engine air intakes set further back on the fuselage and the introduction of a square-tipped, sweptback vertical stabilizer. Incorporation of a more powerful engine has eliminated the need for drag-reducing fairings at the tail. A portion of the engine's afterburner can be seen at the aft end. The F-106B is a combat/trainer variant essentially similar to the F-106A except for a tandem two-seated cockpit.

DATA APPLY TO F-106A

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	CONVAIR	Max. Range (Naut. Miles)		No. of Engines	1
Wing Span	38'	Crew No.	1	Model No.	J-75-P-17
Length	70'	Max. Speed (Knots)	Mach 2 plus	Mfr.	P & W
Combat Weight (Lbs.)	30,000	Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	24,500 #

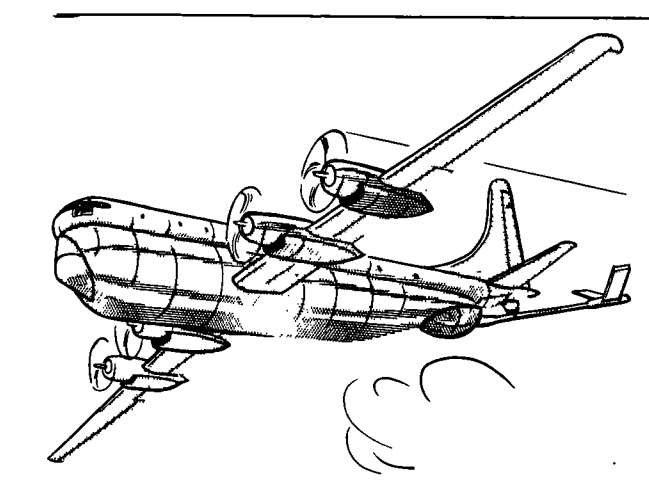
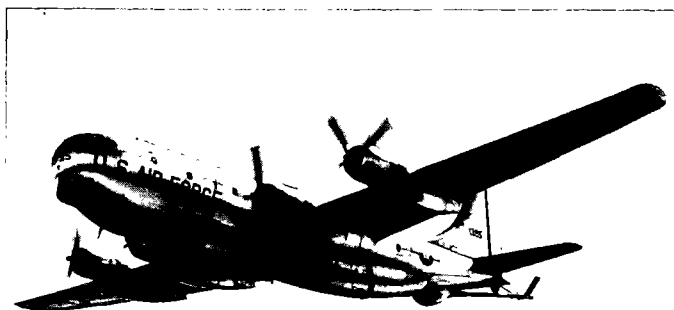
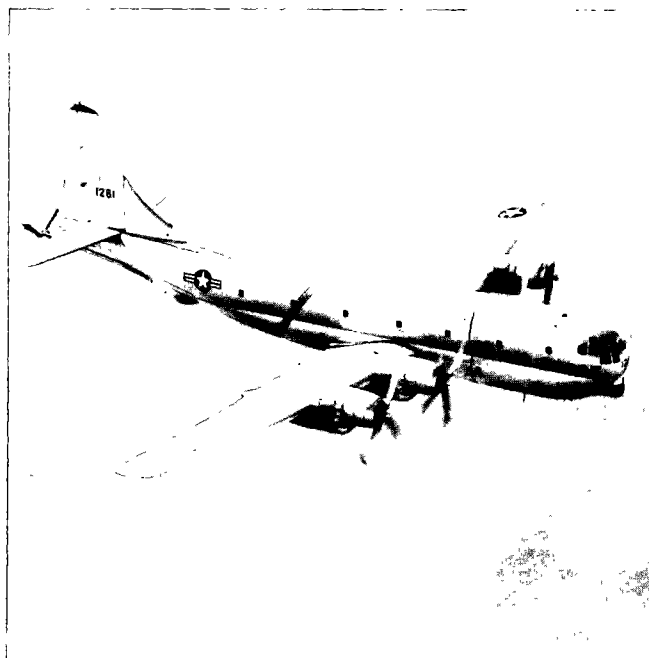




The KC-97 is the tanker version of the C-97 Stratofreighter. It is a midwing, heavy-transport aircraft powered by four radial engines. The wing is blunt tipped with a moderate positive dihedral. The leading edge is backward tapered; the trailing edge is straight. Engine nacelles protrude well forward of the wing leading edge and extend slightly beyond the trailing edge. When seen head on, the double-decked fuselage resembles a figure 8. Its round nose is dominated by the large area of its glassed-in cockpit. Some versions have a radome mounted directly below the cockpit area. The long, deep fuselage appears as an unbroken straight line topside, while the underside tapers considerably from a point aft of amid-ship to the tail cone. Located on the underside of the fuselage is the "flying boom" pod. Both the boom and V-shaped "ruddevator" extend aft of the fuselage. The horizontal stabilizer and large, single vertical stabilizer have a round-tipped configuration with an unequal backward taper.

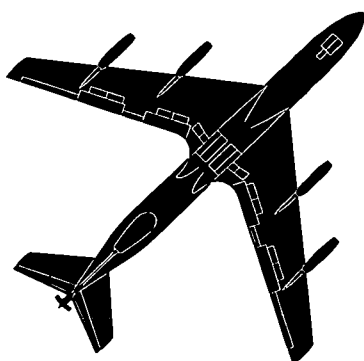
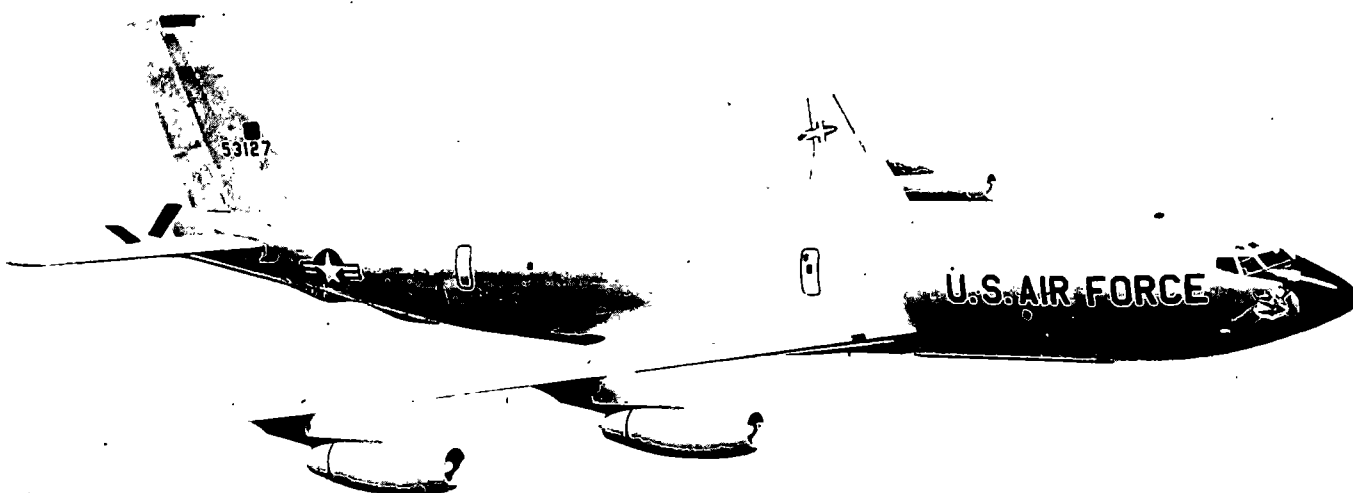
DATA APPLY TO KC-97G

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr	BOEING	Mox Range (Naut. Miles)	4,290	No. of Engines	4
Wing Span	141.2'	Crew No	5	Model No	R-4360-59B
Length	117.4'	Mox Speed (Knots)	326	Mfr.	P & W
Combat Weight (Lbs)	105,780	Service Ceiling (Ft.)	30,000	Type	Piston
				Rating Each	3,500 hp.



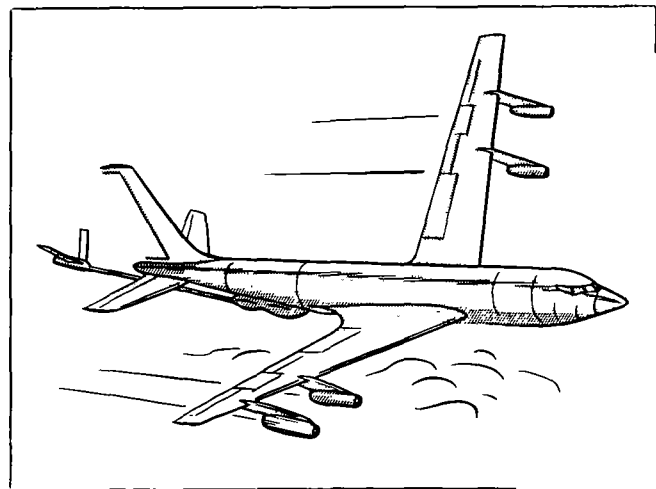
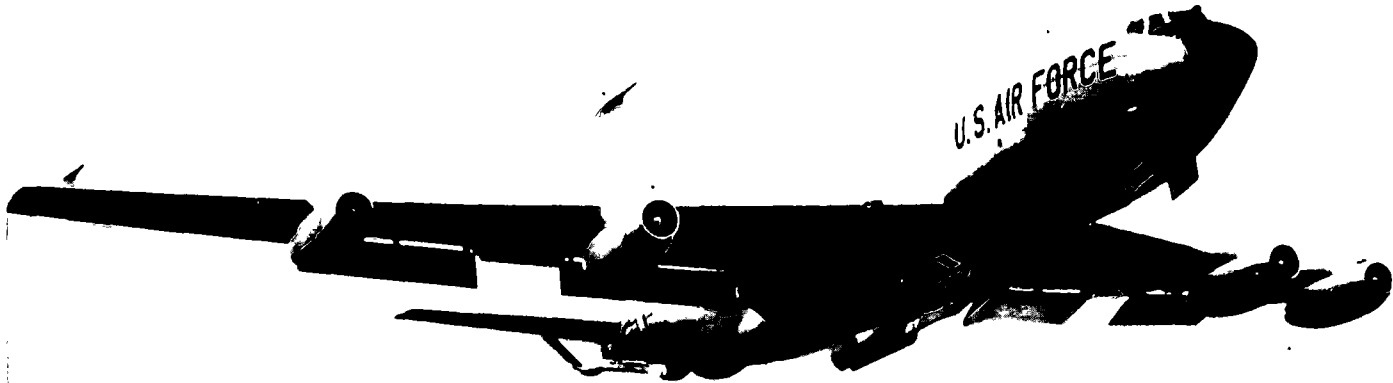
BOEING

KC-135 STRATOTANKER (Military Verison of Commercial Boeing 707)

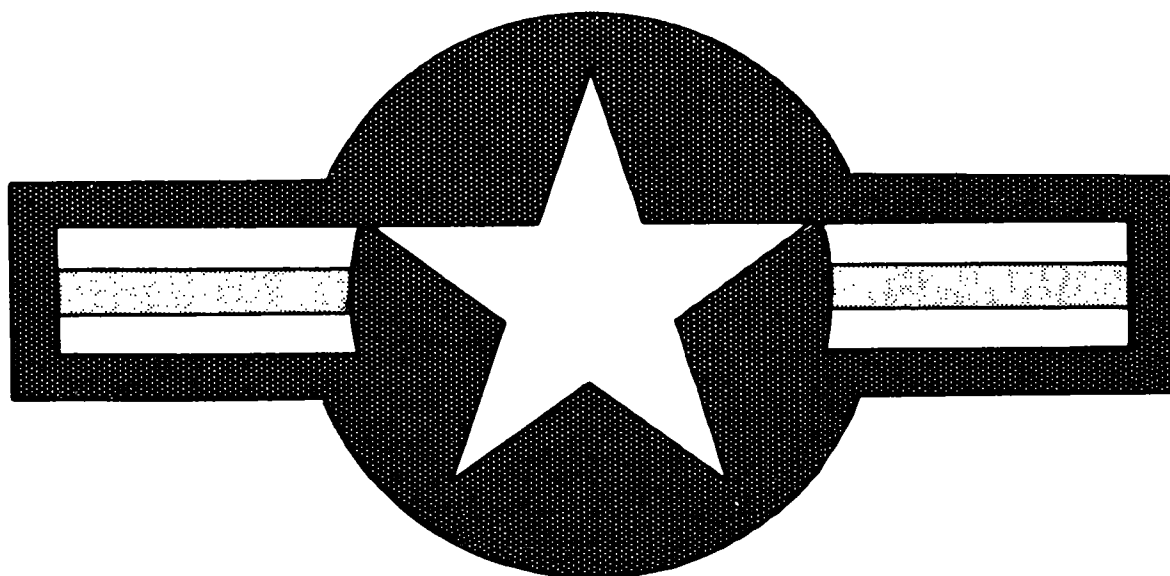


The KC-135 four-jet tanker is a military version of the Boeing 707. Its sweptback and tapered wing, with moderate positive dihedral and squared-off tips, is low midmounted and is filleted at the wing root of the trailing edge. The podded engines are individually pylon-mounted underneath the wing, protruding well forward of the leading edge, and dividing the wing into approximate sixths. Other recognition features are the pointed nose, the stepped-up cockpit, and the long parallel-sided fuselage which thins and tapers moderately upward to a rounded tail cone. The horizontal stabilizer with moderate dihedral combines with the tall vertical stabilizer to form the tail section. Both stabilizers are square tipped, sweptback, and tapered. When not in use, the refueling boom is retracted under the fuselage, with a small portion trailing aft beyond the tail cone. A variation of this aircraft, the VC-137A, is used as a VIP transport.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr	BOEING	Max. Range (Naut. Miles)	7,910	No of Engines	4
Wing Span	130.8'	Crew No.	4	Model No.	J-57-P-59W
Length	136.2'	Max. Speed (Knots)	528	Mfr.	P & W
Combat Weight (Lbs.)	119,850	Service Ceiling (Ft.)	50,200	Type	Turbojet
				Rating Each	13,750 #

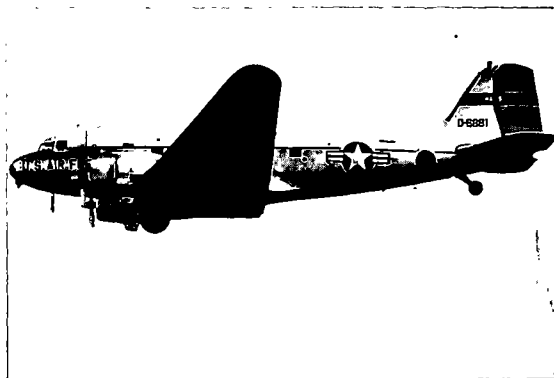


OTHER
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AIRCRAFT

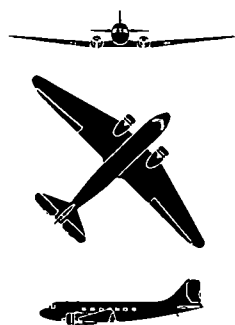


USAF
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U.S. AIR FORCE
OTHER

DOUGLAS**C-47 SKYTRAIN (USN R4D)**

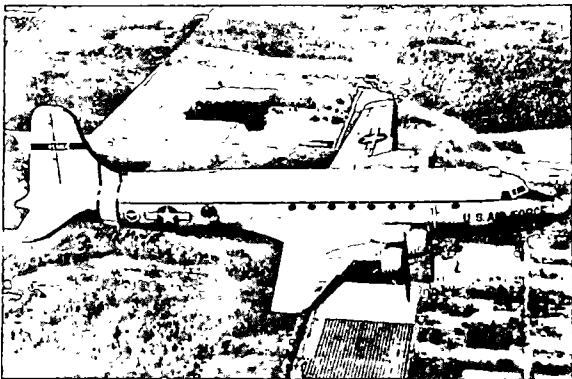
Mfr	DOUGLAS	Max. Speed (Knots)	200
Wing Span	95'	Service Ceiling (Ft.)	22,150
Length	64.4'	No. & Type of Engines	2 Piston
Gross Weight (Lbs.)	21,380	Model No	R-1830-90D
Max Range (Naut. Miles)	1,026	Mfr	P & W
Crew No.	5	Rating Each	1,200 hp.



The C-47 is a twin-engined, low-wing cargo-transport. The wing has sharply rounded tips, a straight trailing edge, and a sharp backward taper along the outer section of the leading edge. Although the center section of the wing has no dihedral, there is a slight positive dihedral in the outer sections. Large engine nacelles protrude forward of the leading edge and are close to the fuselage. The fuselage, with its rounded nose and stepped-up cockpit, tapers evenly toward the tail. A long slender dorsal fairing is combined with the large, blunt-tipped vertical stabilizer, which has an unequal backward taper. The horizontal stabilizer, sharply backward tapered at the leading edge, has rounded tips, no dihedral, and a straight trailing edge with a cutout area near the root. The tail wheel is nonretractable. The C-47 is the Air Force version of the commercial DC-3.

C-54 SKYMASTER (USN R5D)

DOUGLAS



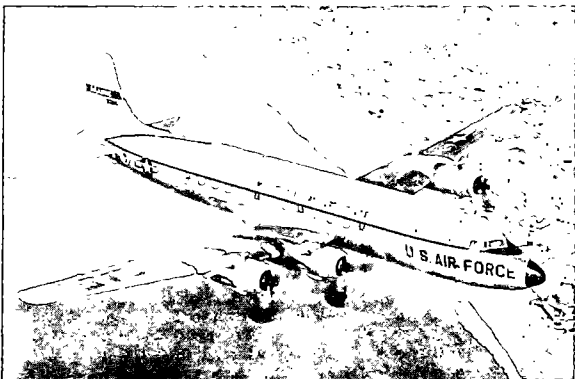
Mfr	DOUGLAS	Max Speed (Knots)	267
Wing Span	117.5'	Service Ceiling (Ft.)	19,000-28,000
Length	93.8'	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	48,000	Model No.	R-2000-9
Max. Range (Naut. Miles)	1,756	Mfr.	P & W
Crew No.	5	Rating Each	1,450 hp.



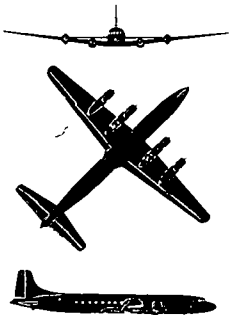
The C-54 is a four-engine cargo-transport. The low-mounted wing has moderate positive dihedral, equitapered leading and trailing edges, and round tips, with the engine nacelles extending forward of the wing leading edge. The round fuselage has a pointed nose, stepped-up cockpit, and tapers evenly toward the tail. An equitapered horizontal stabilizer, with no dihedral, in combination with the tall, tapered vertical stabilizer forms the tail assembly. Both horizontal and vertical stabilizers are round tipped. The pointed fuselage tail cone extends aft of the vertical stabilizer. The C-54 is the Air Force version of the commercial DC-4.

C-118 LIFTMASTER (USN R6D)

DOUGLAS



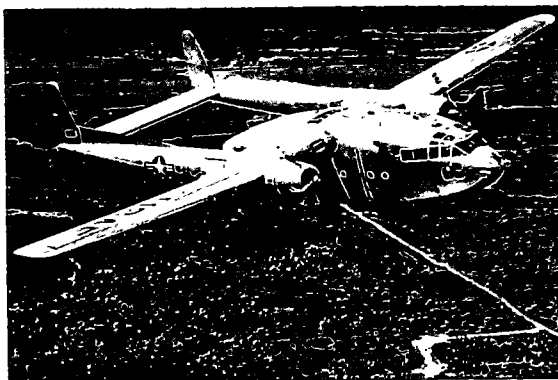
Mfr.	DOUGLAS	Max. Speed (Knots)	320
Wing Span	117.5'	Service Ceiling (Ft.)	25,000
Length	106.8'	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	69,337	Model No.	R-2800
Max. Range (Naut. Miles)	1,700	Mfr.	P & W
Crew No.	4	Rating Each	2,500 hp.



The C-118 is the freight-carrying version of the four-engine commercial DC-6 transport. Except for a 6-foot longer fuselage and a narrower and blunter vertical stabilizer, the C-118 shares all the recognition features of the C-54/DC-4 aircraft.

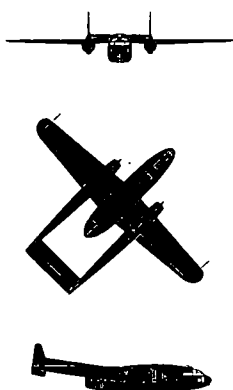
FAIRCHILD

C-119 FLYING BOXCAR



DATA APPLY TO C-119G

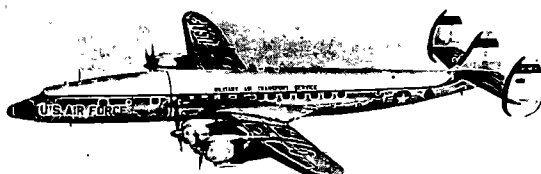
Mfr.	FAIRCHILD	Max. Speed (Knots)	253
Wing Span	109.3'	Service Ceiling (Ft.)	25,870
Length	86.5'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	49,780	Model No.	R-3350
Max. Range (Naut. Miles)	1,415	Mfr.	WRIGHT
Crew No.	5	Rating Each	3,500 hp.



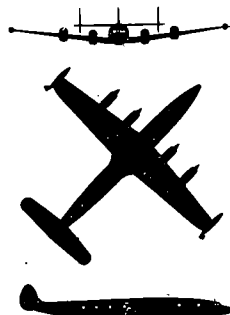
The C-119 is a high-wing, twin-engine cargo-transport. The wing, equitapered with round tips, has moderate negative dihedral in the center section and no dihedral in the outboard sections. Mounted at the forward end of the tail booms and protruding forward of the wing's leading edge are the engines. The podlike, boxy fuselage, suspended from the wing, has a rounded nose and a stepped-up cockpit. If doors forming the rear of the fuselage are removed, the rear fuselage will appear square. The horizontal stabilizer is a rectangular surface between the aft end of the twin booms. An equitapered, round-tipped vertical stabilizer with a long dorsal fairing is located atop each of the round, tapered booms.

LOCKHEED

C-121G SUPER CONSTELLATION



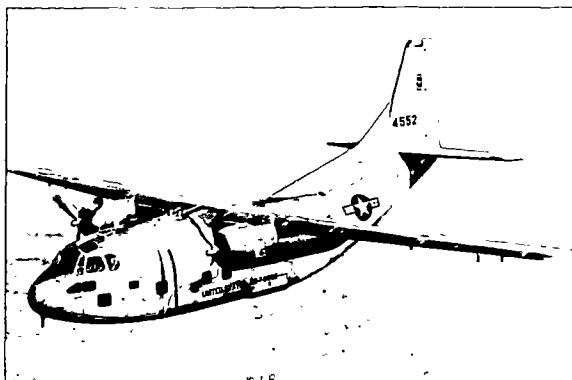
Mfr.	LOCKHEED	Max. Speed (Knots)	320
Wing Span	123'	Service Ceiling (Ft.)	27,000
Length	116.2'	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	88,600	Model No.	R-3350-91
Max. Range (Naut. Miles)	1,810	Mfr.	WRIGHT
Crew No.	5	Rating Each	3,250 hp.



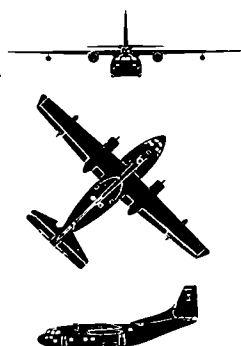
The C-121G is a four-engine, long-range cargo-transport adapted from the commercial Lockheed Super Constellation. The wing has sharp positive dihedral, is almost equitapered, and has rounded tips. Fillets are used at the wing root trailing edge, while large engine nacelles protrude well forward of the wing's leading edge. The round fuselage has a pointed nose, a stepped-up cockpit, and a somewhat drooping appearance. A large, round-tipped horizontal stabilizer, with no dihedral and the same shape as the wing, is mounted atop the aft fuselage. Combined with three vertical stabilizers, it forms the tail section. The two outboard vertical stabilizers are egg shaped. They are mounted near the tips of the horizontal stabilizer and extend below the horizontal control surface. The center vertical stabilizer is less rounded in shape and the leading edge is faired into the fuselage topside. Reconnaissance versions of this aircraft are fitted with extremely large topside and belly-mounted radomes.

C-123 PROVIDER

FAIRCHILD



Mfr.	FAIRCHILD	Max. Speed (Knots)	209
Wing Span	110'	Service Ceiling (Ft.)	29,360
Length	76.2'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	36,415	Model No.	R-2800-99W
Max. Range (Naut. Miles)	1,131	Mfr.	P & W
Crew No.	3	Rating Each	2,500 hp.

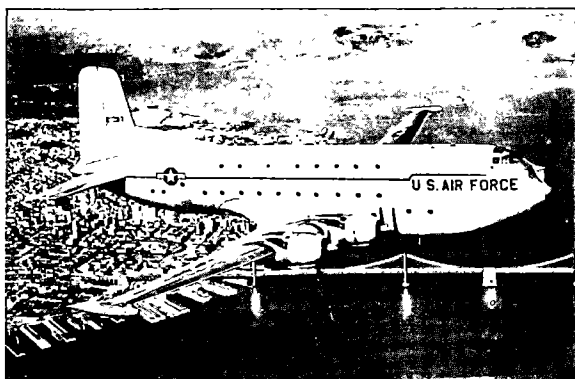


The C-123 is a high-wing, two-engine cargo-transport. The narrow wing, with no dihedral, has unequal forward taper and blunt, raked tips. The engines are slung under the wing, protruding well forward of the leading edge and slightly aft of the trailing edge. In addition to the rounded nose and stepped-up cockpit, there is a broad, flat-bottomed fuselage, which is sharply upswept and tapered to the aft. Both vertical and horizontal stabilizers have unequal backward taper and square tips, while a large dorsal fairing has been added to increase directional stability. The C-123's overall angularity is its most noticeable feature.

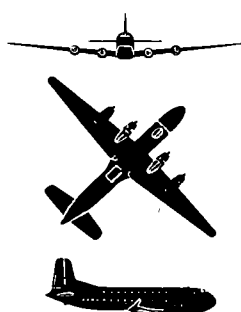
C-124 GLOBEMASTER II

DOUGLAS

DATA APPLY TO C-124C



Mfr.	DOUGLAS	Max. Speed (Knots)	278
Wing Span	174.1'	Service Ceiling (Ft.)	26,400
Length	130'	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	123,700	Model No.	R-4360-63
Max. Range (Naut. Miles)	1,700	Mfr.	P & W
Crew No.	5	Rating Each	3,800 hp.

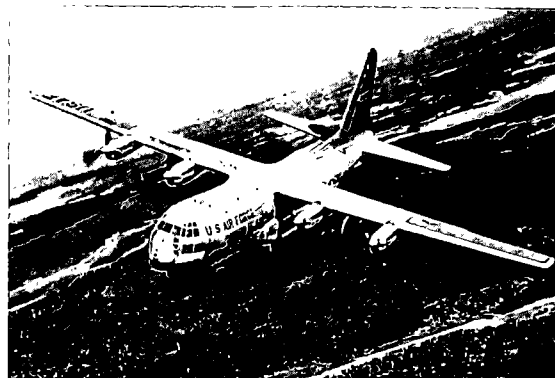


The C-124 is a low-wing, four-engine, heavy cargo-transport. Its long, equitapered wing has moderate positive dihedral, rounded tips, and fillets at the root of the trailing edge. The thick forward portion of the double-deck fuselage has a rounded nose and stepped-up cockpit. Noticeably smaller aft of the wing, the fuselage tapers to a pointed tail cone, where the equitapered, curved-tip horizontal stabilizer with no dihedral is midmounted on the aft fuselage. Combined with a large dorsal fairing, there is a blunt-tipped vertical stabilizer with an unequal backward taper. Large clamshell doors in the nose facilitate loading very heavy equipment, such as tanks or field guns. Later models have a high-mounted protruding nose radome.

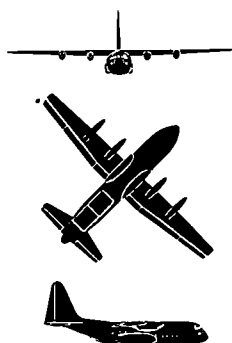
LOCKHEED

C-130 HERCULES

DATA APPLY TO C-130B



Mfr.	LOCKHEED	Max. Speed (Knots)	331
Wing Span	132.6'	Service Ceiling (Ft.)	37,500
Length	97.8'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	83,100	Model No.	T-56-A-7
Max. Range (Naut. Miles)	1,835	Mfr.	ALLISON
Crew No.	4	Rating Each	3,755 hp.

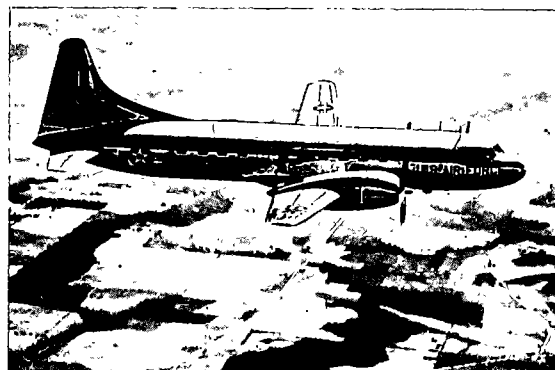


The C-130 is a cargo-transport. The high wing has no dihedral and is blunt tipped. The leading edge is straight; the trailing edge, while straight in the center section, has forward taper along the outer sections. The four slender turboprop engine nacelles protrude equidistantly forward of the leading edge. There is a large, round fuselage with a distinctive, rounded raked nose, and an inset cockpit. The underside of the fuselage tapers upward sharply aft of the wing to accommodate the large cargo doors, then tapers gently to the tail. A blunt-tipped horizontal stabilizer with no dihedral combines with a large, round-tipped vertical stabilizer and dorsal fairing to form the tail section. Both stabilizers have an unequal backward taper. Housings for the retractable undercarriage are mounted low amidship on either side of the fuselage, providing an additional distinctive recognition feature. In addition, some models of the C-130 have low-mounted, protruding nose radomes.

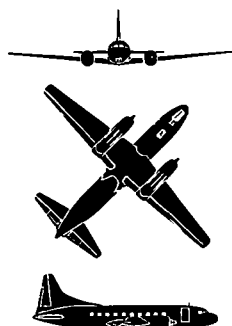
CONVAIR

C-131 SAMARITAN (USN R4Y)

DATA APPLY TO C-131D



Mfr.	CONVAIR	Max. Speed (Knots)	272
Wing Span	105.3'	Service Ceiling (Ft.)	26,500
Length	79.2'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	37,045	Model No.	R-2800-103W
Max. Range (Naut. Miles)	1,500	Mfr.	P & W
Crew No.	4	Rating Each	2,500 hp.

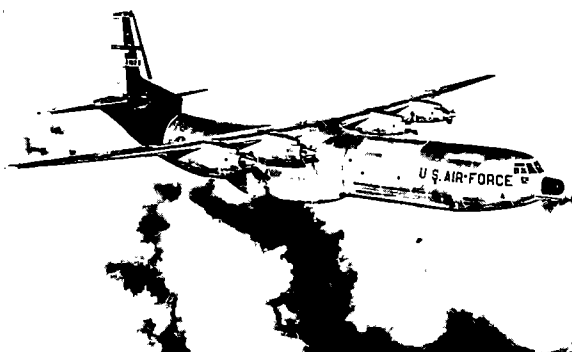


The C-131 is a two-engine cargo-transport. The low-mounted wing is equitapered and blunt tipped, with moderate positive dihedral. There are small fillets at the root of the trailing edge. Large engine nacelles protrude well forward of the wing's leading edge and are squared off slightly beyond the trailing edge. A rounded nose and stepped-up cockpit are features of the forward fuselage. The aft fuselage tapers evenly to a pointed tail cone. Both horizontal and vertical stabilizers are equitapered and blunt tipped. Combined with a large, curved dorsal fairing, they form the tail section. The C-131A and T-29 (aircrew trainer) are based on the Convair 240, while the longer-wing-span, longer-fuselage C-131D is developed from the Convair 340 and Convair 440.

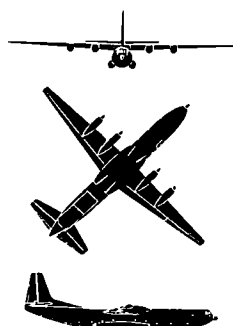
C-133 CARGOMASTER

DOUGLAS

DATA APPLY TO C-133B



Mfr.	DOUGLAS	Max. Speed (Knots)	323
Wing Span	179.7'	Service Ceiling (Ft.)	31,200
Length	157.5'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	153,450	Model No.	T34-P-9W
Max. Range (Naut. Miles)	1,665	Mfr.	P & W
Crew No.	4	Rating Each	7,500 hp.



The C-133 is a high-wing, heavy cargo-transport. The wing is forward tapered, with a straight leading edge and squared-off tips. The four slender turboengines protrude equally forward of the straight leading edge. A radome also protrudes from the rounded nose below the inset cockpit. There are large landing-gear housings mounted low amidships on either side of the fuselage. A blunt-tipped horizontal stabilizer with no dihedral is mounted atop the upswept aft fuselage. An extremely tall, square-tipped vertical stabilizer combines with a long dorsal fairing to complete the tail section. The C-133B differs from the earlier A model in its more powerful engines, and its clamshell aft cargo loading doors, designed to accommodate loading of large missiles.

BOEING

KB-50



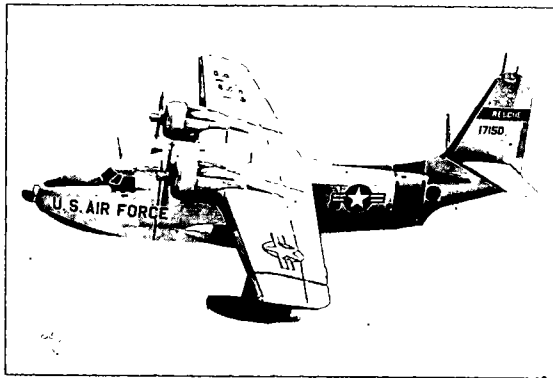
Mfr.	BOEING	Max. Speed (Knots)	386
Wing Span	141.2'	Service Ceiling (Ft.)	38,800
Length	105.1'	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	116,350	Model No.	R-4360-35
Max. Range (Naut. Miles)	4,730	Mfr.	P & W
Crew No.	6	Rating Each	3,500 hp.



The KB-50, tanker version of the B-50 Superbomber, differs very little from the B-29/KB-29 aircraft from which it evolved. It can be identified by its considerably taller and larger vertical stabilizer; larger engine nacelles, each extending aft of the wing; and the slightly modified wing trailing edge.

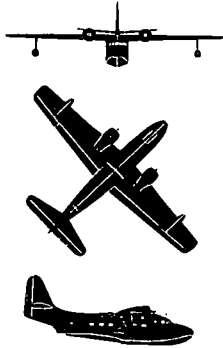
GRUMMAN

SA-16 ALBATROSS



DATA APPLY TO SA-16B

Mfr.	GRUMMAN	Max. Speed (Knots)	209
Wing Span	96.7'	Service Ceiling (Ft.)	16,800
Length	62.8'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	36,000	Model No.	R-1820-76
Max. Range (Naut. Miles)	2,340	Mfr.	WRIGHT
Crew No.	4	Rating Each	1,425 hp.



The SA-16 is a high-wing, general-purpose, utility amphibian with two engines. The blunt, tip wing is almost equitapered and is set with no dihedral. Fixed wing floats (suspended from cabane struts near the wing tips) and high-mounted engines protrude forward of the wing's leading edge. The slab-sided hull of the two-step design has a stepped-up cockpit. The backward-tapered horizontal stabilizer has a straight trailing edge; set with slight positive dihedral, it is mounted above the fuselage directly on the large vertical stabilizer. Both stabilizers are round tipped, but the vertical stabilizer has an unequal backward taper.

NORTHROP

T-38 TALON



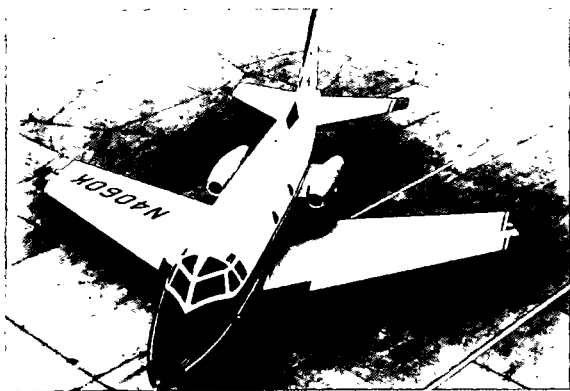
Mfr.	NORTHROP	Max. Speed (Knots)	712
Wing Span	25.3'	Service Ceiling (Ft.)	53,900
Length	44.2'	No. & Type of Engines	2 Turbojet
Combat Weight (Lbs.)	9,920	Model No.	J85-GE-5
Max. Range (Naut. Miles)	985	Mfr.	GE
Crew No.	2	Rating Each	3,850 # plus A.B.



The T-38 is a supersonic, twin-jet basic trainer intended to reproduce the flight characteristics of a supersonic operational fighter. The crew sit in tandem under separate canopies, with the instructor's seat raised to provide a forward view over the student's shoulder. The two jet intakes are set one on either side of the fuselage on a line with the cockpit rear. The pointed-nose fuselage itself narrows in the wing region and bulges out aftward in accordance with area rule. The wing section is thin with moderately sweptback leading edge and a trailing edge that angles slightly forward. The one-piece all-flying horizontal stabilizer is set low on the fuselage. Wings, vertical stabilizer, and horizontal stabilizer all have squared-off tips. The T-38 is intended as a replacement for the T-33 trainer.

T-39 SABRELINER

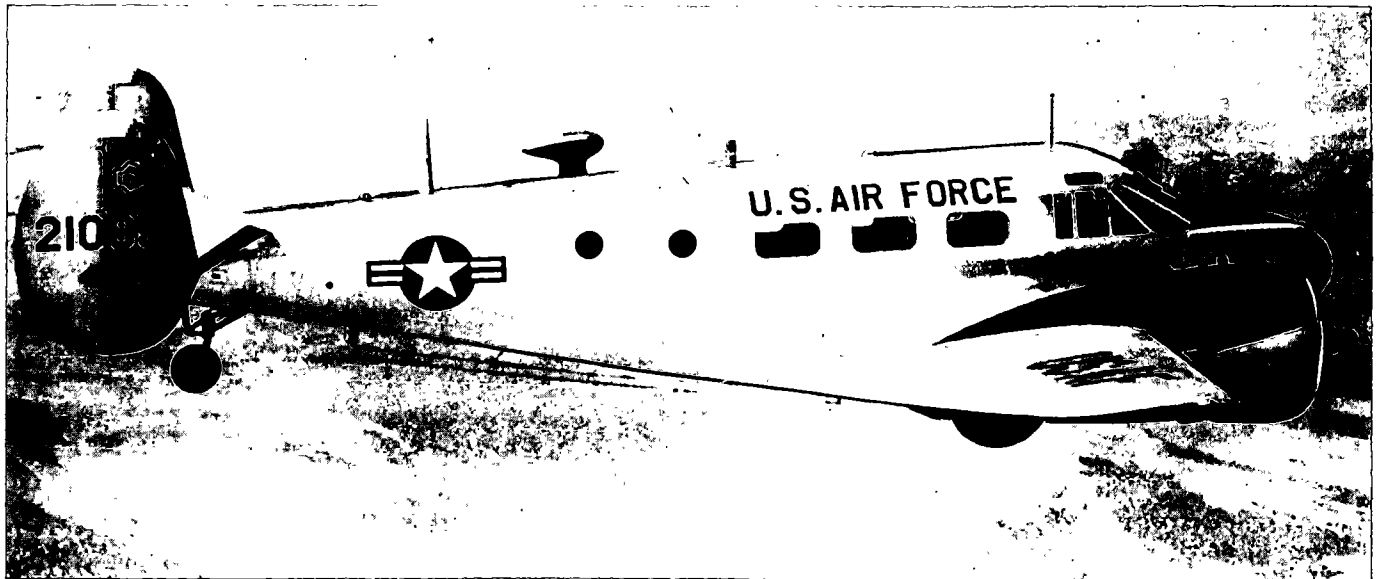
NORTH AMERICAN



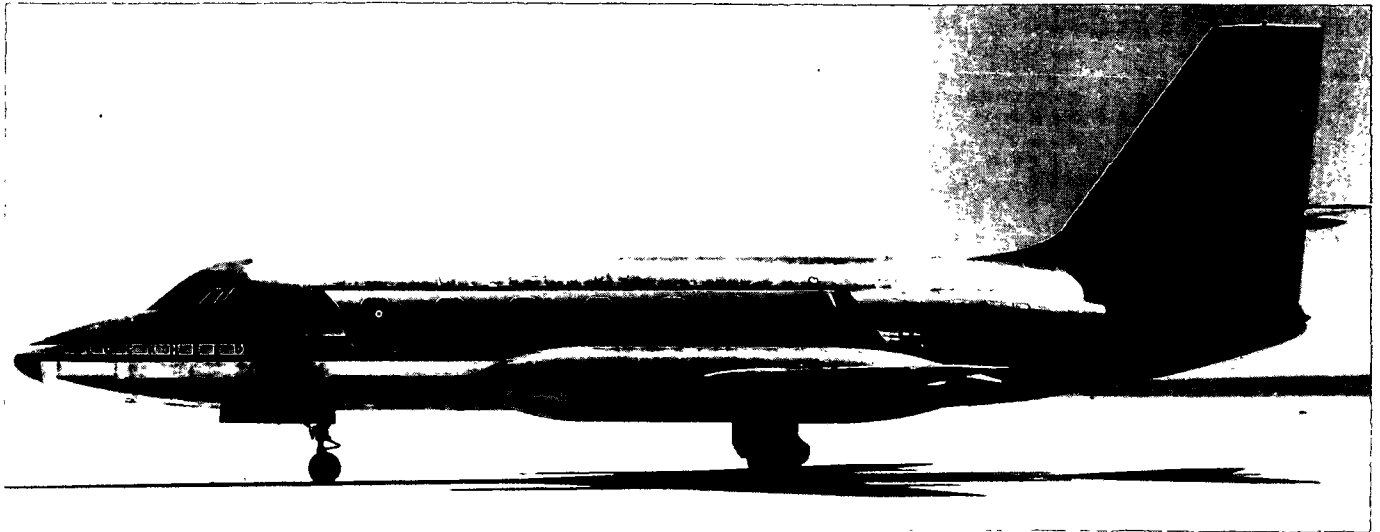
Mfr.	NORTH AMERICAN	Max. Speed (Knots)	525
Wing Span	44.4'	Service Ceiling (Ft.)	42,400
Length	43.8'	No. & Type of Engines	2 Turbojet
Combat Weight (Lbs.)	13,800	Model No.	J60-P-3
Max. Range (Naut. Miles)	1,405	Mfr.	P & W
Crew No.	2	Rating Each	3,000 #



The T-39 is a small, twin-jet utility trainer, primarily intended for pilot training and maintenance of flight proficiency. It normally carries a crew of two, and accommodates four passengers in the pressurized cabin. The fuselage shows a moderately pointed nose and a stepped-up cockpit, and narrows to a pointed tail. The two jet engines are mounted on the rear of the fuselage, above the wings and extending aft of the trailing edges. The moderately swept back wings are set very low on the fuselage midsection. The tall vertical stabilizer shows a swept back leading edge fairing into the fuselage; a flush antenna forms its tip. The all-flying horizontal stabilizer, which also shows moderate sweepback, is set high on the fuselage directly below the vertical fin.



The C-45 (USN SNB) is a twin-engine trainer, utility, and administrative aircraft.



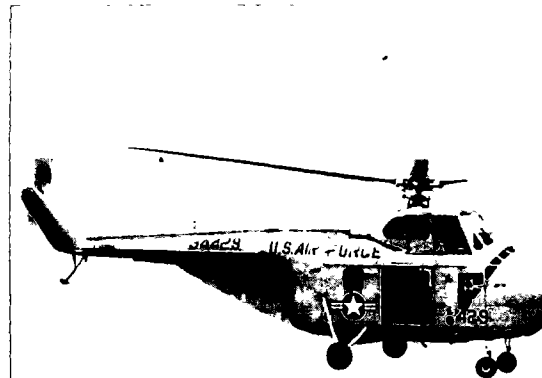
The C-140 JET STAR is a light jet transport.



The F-94C is a two-place all-weather interceptor that is radar equipped.



The H-13 is the Air Force version of the Navy HTL.



The H-19 is also in service with the RAF and the Royal Navy.



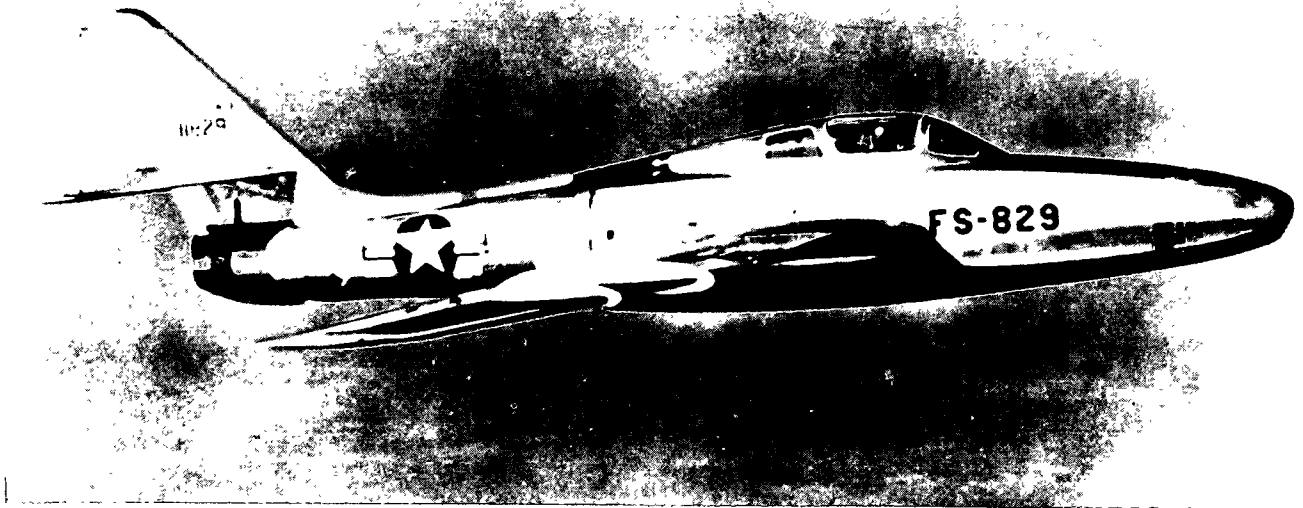
The H-21 RESCUER is capable of carrying 12 stretchers or 20 troops long distances.



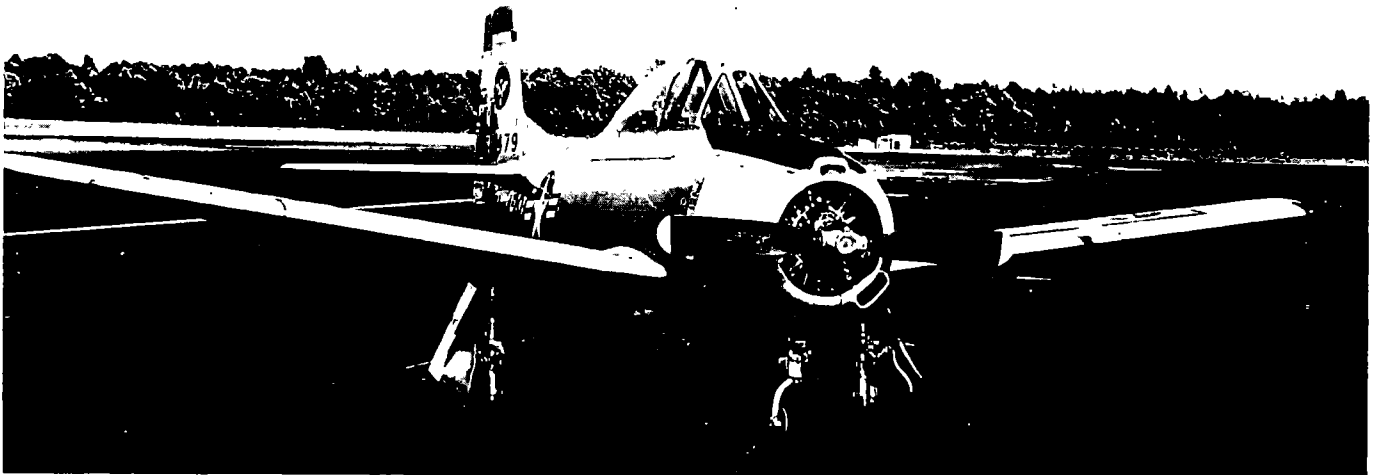
The H-43A carries a pilot, rescue crew of three, and fire-fighting equipment.



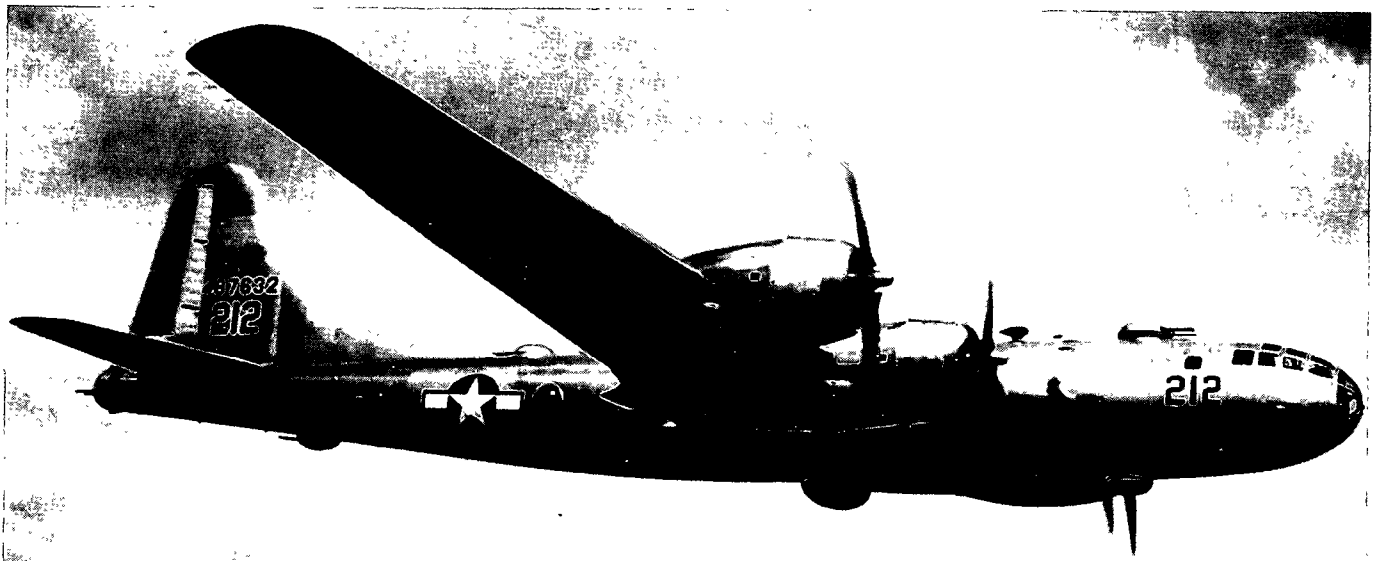
The H-43B has twice as much usable cabin space as the H-43A.



The RF-84F is the reconnaissance version of the F-84F fighter-bomber.



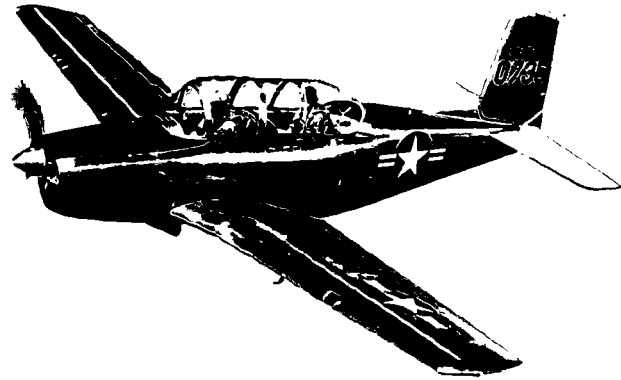
The T-28A advanced trainer.



The T-29 is a trainer version of the B-29 bomber.



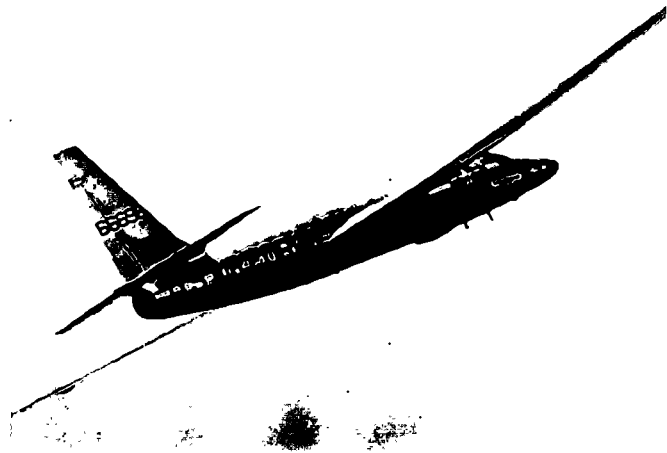
The T-33 is a two-seat version of the F-80 SHOOTING STAR.



The T-34 is a two-seat, primary trainer used by both the Air Force and the Navy.



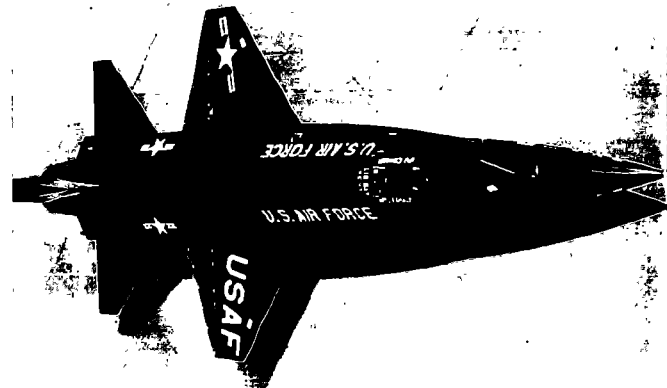
The TB-25 is a multiengine trainer version of the B-25 Mitchell.



The U-2 is a high-altitude research aircraft.

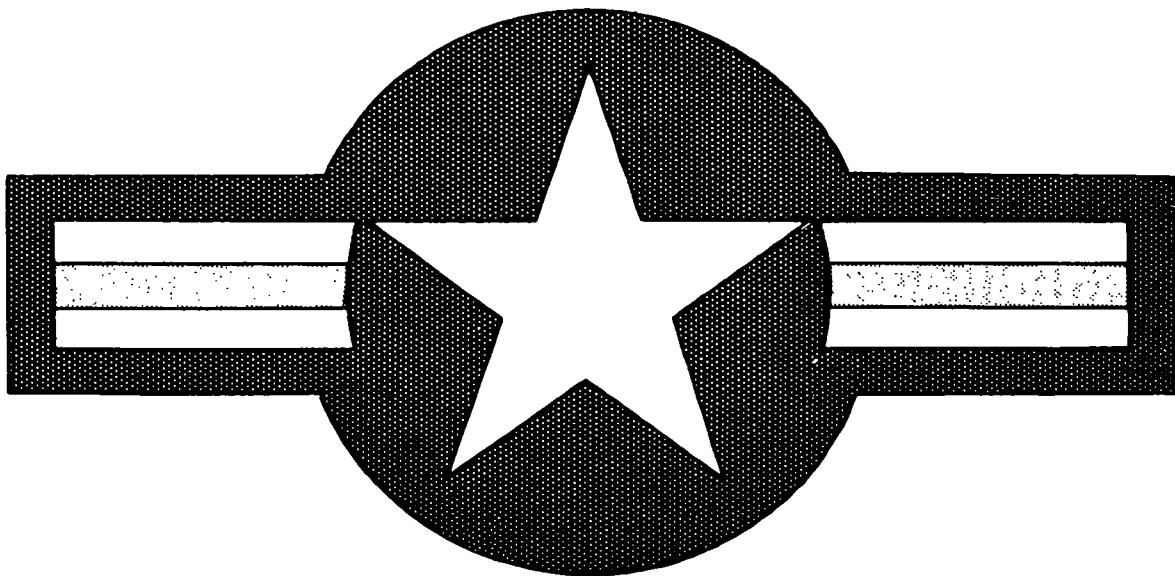


The U-3A is a military version of the Cessna Model 310B.



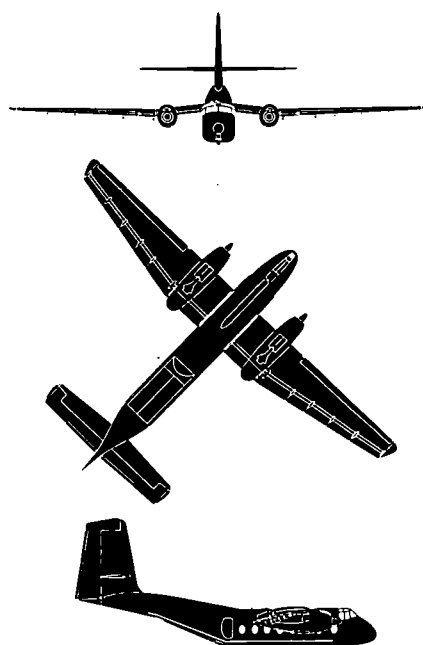
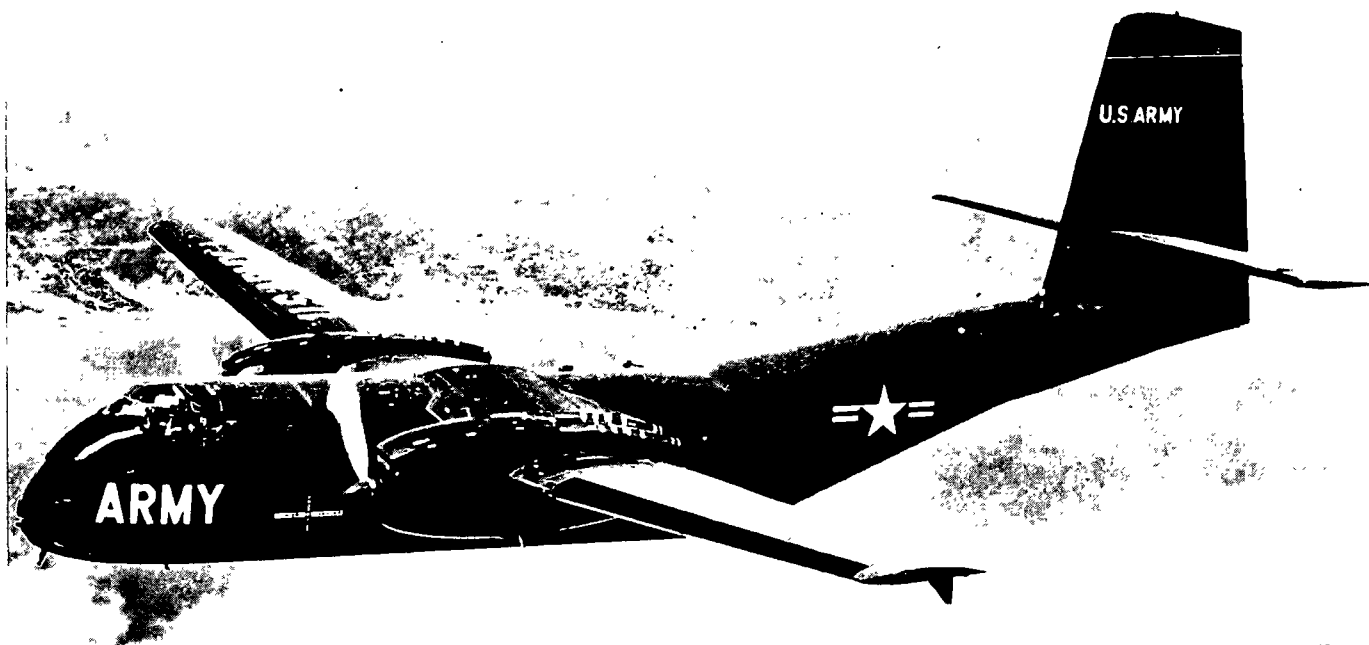
The X-15 experimental aircraft.

U. S. ARMY



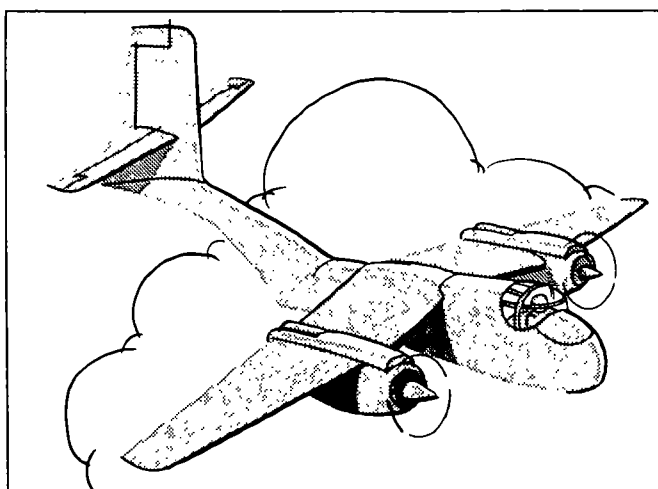
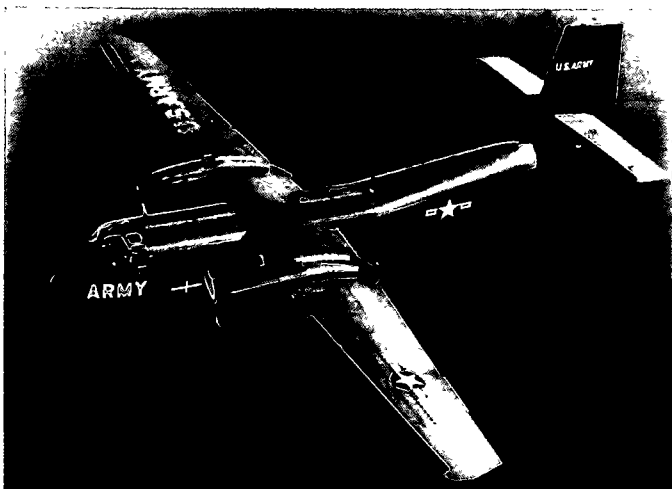
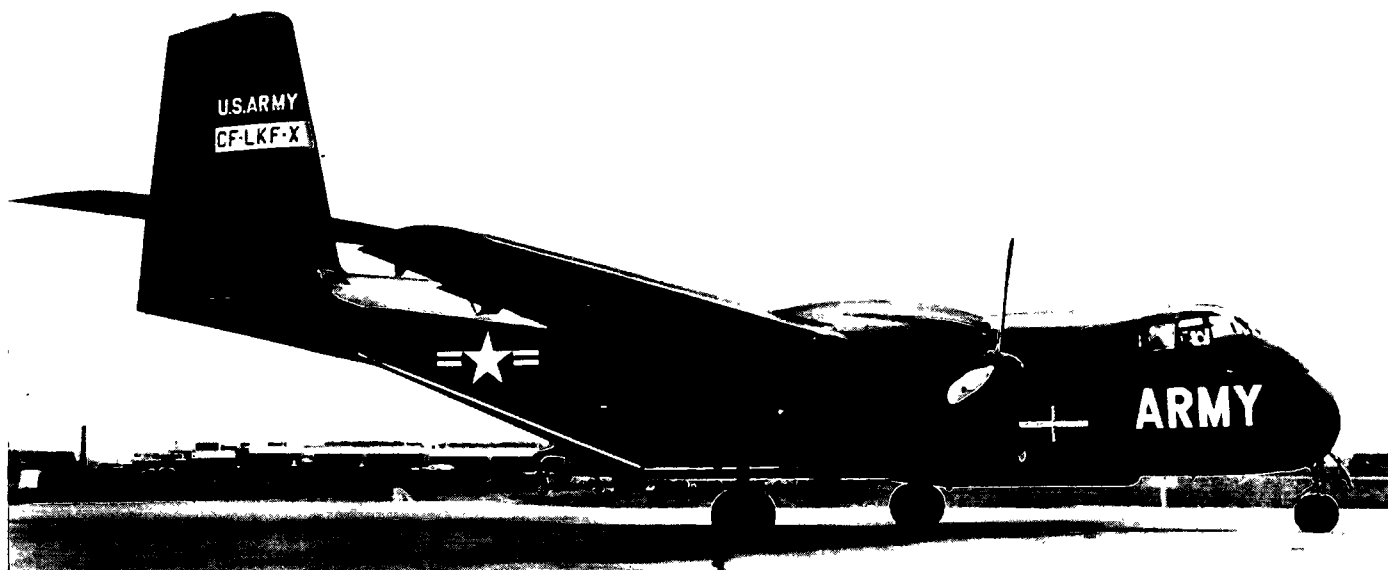
U.S.
ARMY

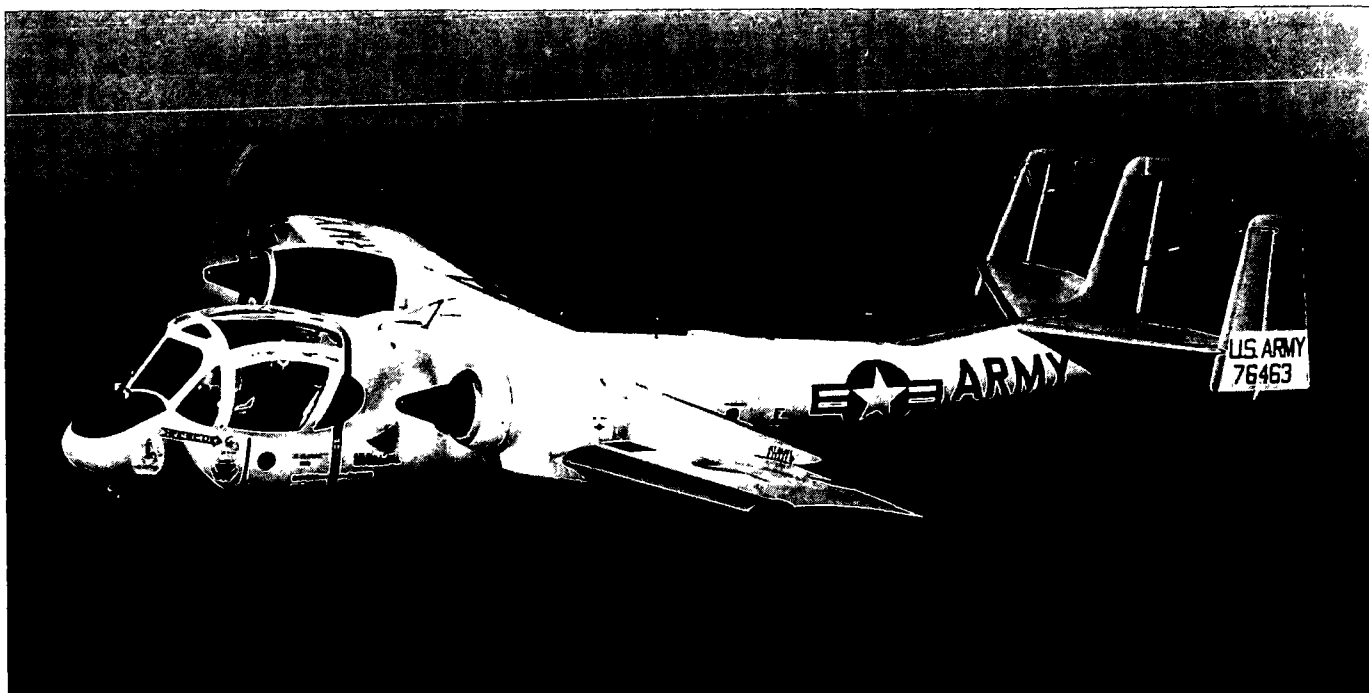
ARMY



The AC-1 Caribou was developed for both civil and military roles. It is a twin-engine, all-weather utility transport with a load-carrying capacity comparable to a DC-3. It has short take-off (490 feet clear) and landing (1,000 feet) performance characteristics. The prime function of the AC-1 is to provide rapid mobility of troops, equipment, and supplies in forward battle areas. It can carry 32 fully equipped troops, or 20 patients and 4 attendants. The Caribou features direct rear loading into the fuselage. Its recognition characteristics include: a long, square-shaped fuselage, which from the side has an extremely upswept after section; a high-set, almost square vertical stabilizer; and a high, long, straight-leading-edge wing set well forward on the fuselage with the engines mounted close inboard. Overall, the Caribou has a glider-like appearance.

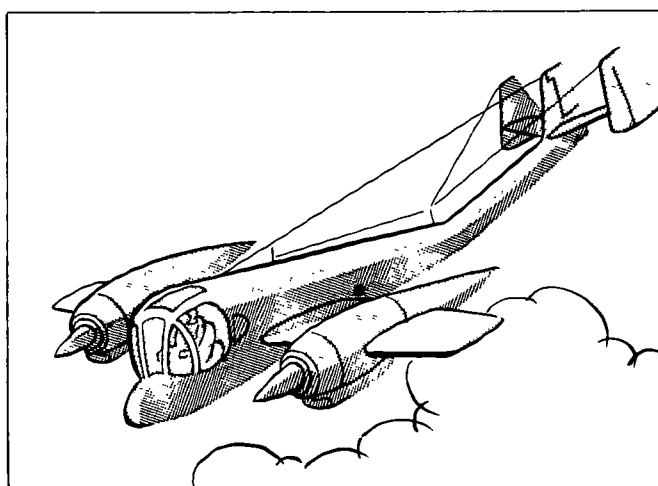
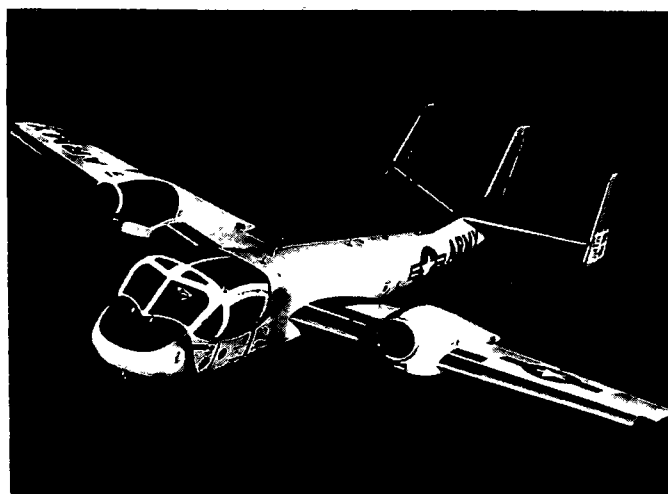
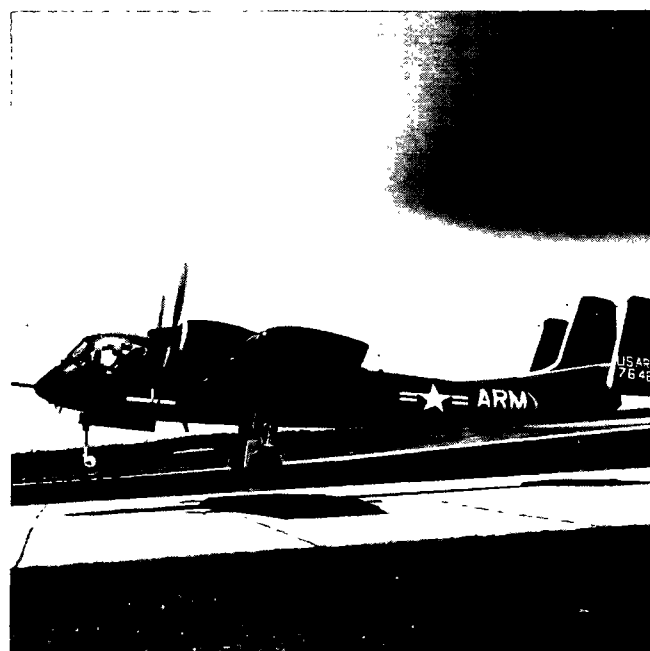
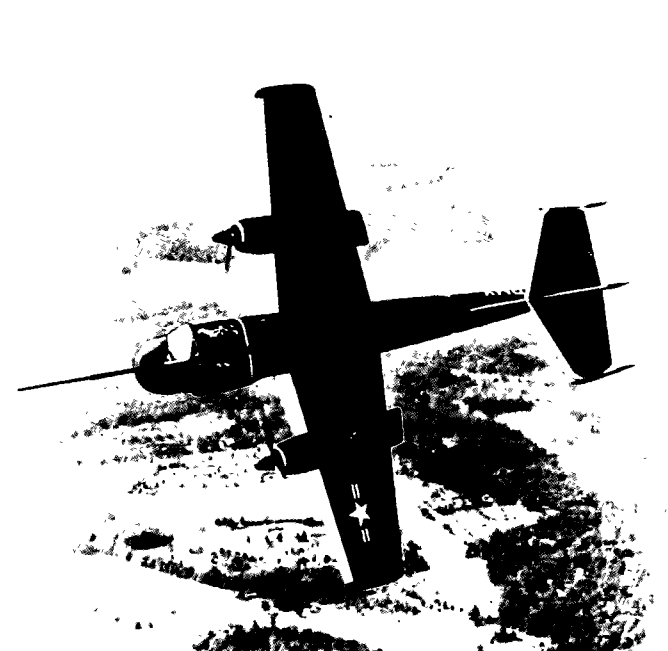
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DE HAVILLAND	Max. Range (Naut. Miles)	1,350	No. of Engines	2
Wing Span	96'	Crew No.	2	Model No	R-2000-7M2
Length	68'9½"	Max. Speed (Knots)	185	Mfr.	P & W
Combat Weight (Lbs.)	24,000	Service Ceiling (Ft.)	27,500	Type	Piston
				Rating Each	1,450 hp.





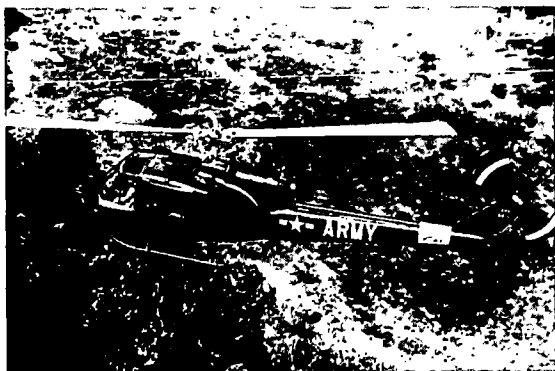
The AO-1 is a high-performance observation aircraft developed for the U.S. Army. It is a mid-wing monoplane with tricycle landing gear and is powered by two Lycoming T53 turboprop engines. The AO-1 is designed to operate from short, unimproved airstrips, and carries a crew of two in side-by-side ejection seats. It is equipped with different types of cameras as well as SLAR gear (Side Looking Airborne Radar) which provides a permanent aerial radar map of terrain on either side of the aircraft's flight path. The sides of the cockpit are bulged to permit downward visibility. The tail unit of the AO-1 has a central and two end-plate fins and rudders.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	GRUMMAN	Mox. Range (Naut. Miles)	1,670	No. of Engines	2
Wing Span	42'	Crew No	2	Model No	T53-L-3
Length	41'	Mox. Speed (Knots)	275	Mfr.	LYCOMING
Combat Weight (Lbs.)	10,088	Service Ceiling (Ft.)	32,500	Type	Turboprop
				Rating Each	1,005 hp.



BELL

HU-1A IROQUOIS



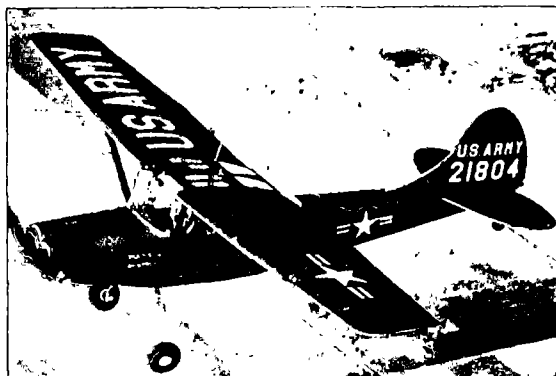
Mfr.	BELL	Max. Speed (Knots)	88
Rotors Operating	53'	Service Ceiling (Ft.)	18,000
Height	14.6'	No. & Type of Engines	1 Turbine
Combat Weight (Lbs.)	5,544	Model No.	T53-L-1A
Max. Range (Naut. Miles)	149	Mfr.	LYCOMING
Crew No.	2	Rating Each	



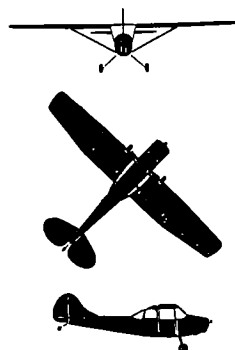
The HU-1A Iroquois is a gas-turbine powered helicopter. It has a two-bladed main rotor and a two-bladed tail rotor of all metal construction. Its principal usage is medical evacuation, transportation of personnel or cargo, and instrument training. The unit is capable of taking off from prepared or unprepared take-off and landing areas under all weather conditions.

CESSNA

L-19 BIRD DOG (Marine Corps OE-1)



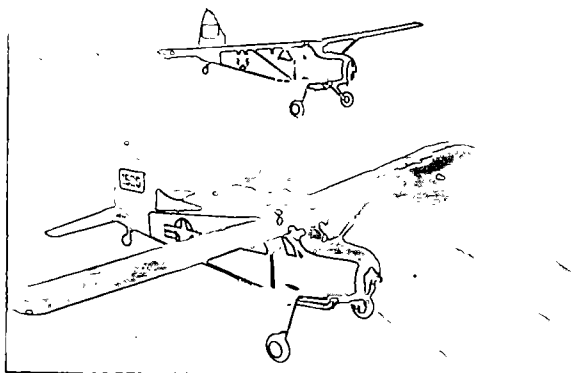
Mfr.	CESSNA	Max. Speed (Knots)	101
Wing Span	36'	Service Ceiling (Ft.)	20,050
Length	24'11"	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	2,200	Model No.	O-470
Max. Range (Naut. Miles)	454	Mfr.	CONTINENTAL
Crew No.	2	Rating Each	213 hp.



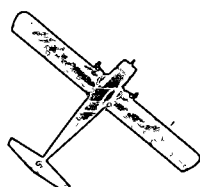
The L-19 is an all-metal, high-wing, light liaison-observation aircraft with a single engine. The wing has a slightly curved leading edge and no dihedral. The trailing edge is straight inboard, then tapers forward to the blunt wing tips. The center portion of the wing above the cockpit is glassed in. Supporting struts run between the lower fuselage and midwing. The horizontal stabilizer has a backward-tapered leading edge and a rounded trailing edge with cut-out for rudder movement. A large, rounded vertical stabilizer completes the tail section. The nonretractable landing gear is made from two spring-steel leaves and can be equipped with skis or flotation gear.

L-20 BEAVER

DE HAVILLAND



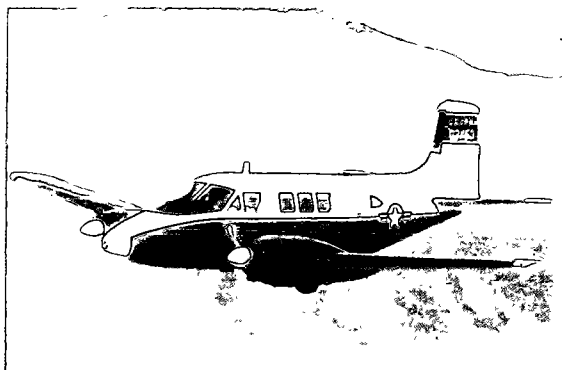
Mfr.	DE HAVILLAND	Max. Speed (Knots)	142
Wing Span	48'	Service Ceiling (Ft.)	19,900
Length	30'3"	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	4,559	Model No.	R-985
Max. Range (Naut. Miles)	531	Mfr.	P & W
Crew No.	2	Rating Each	450 hp.



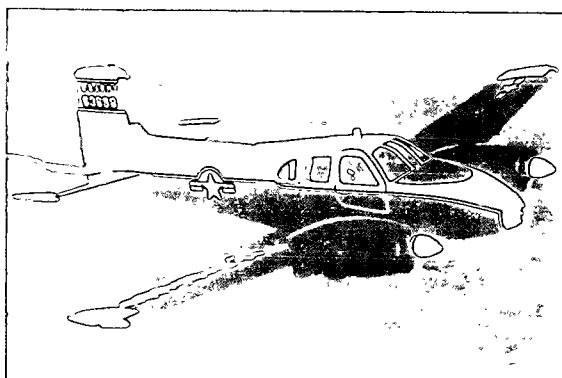
The L-20 is a high-wing liaison-rescue aircraft, with a single reciprocating engine. The rectangular wing has no dihedral, and blunt, raked tips. The nose-mounted radial engine gives the forward fuselage a squared-off appearance. The horizontal stabilizer is equitapered, with no dihedral, and has blunt, raked tips. A curved, pointed-tip vertical stabilizer with a dorsal fairing completes the tail section. The strut-type landing gear and tail wheel can be interchanged for skis or floats.

L-23D SEMINOLE

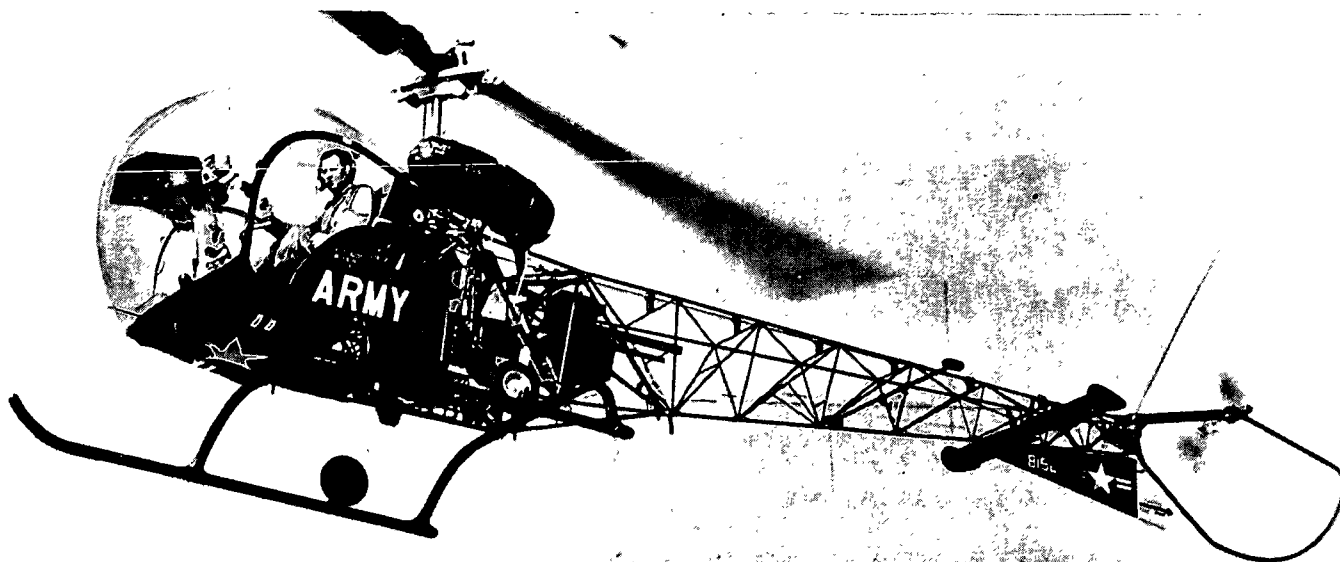
BEECH



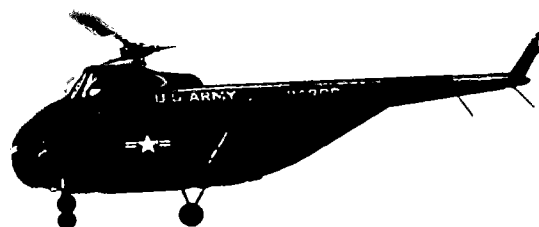
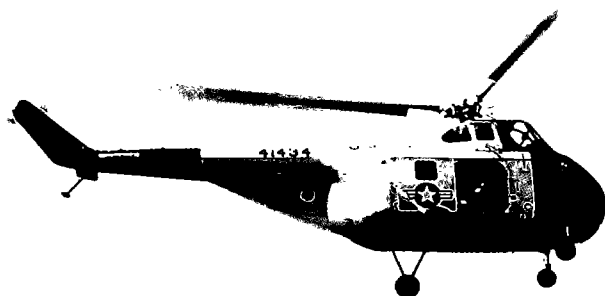
Mfr.	BEECH	Max. Speed (Knots)	240
Wing Span	45'3"	Service Ceiling (Ft.)	25,500
Length	31'5"	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	5,953	Model No.	GO-480-1
Max. Range (Naut. Miles)	1,600	Mfr.	LYCOMING
Crew No.	2	Rating Each	285 hp.



The L-23D is a low-wing monoplane used by the Army for the transportation of personnel. It can be converted into a cargo carrier by removing the rear cabin seat and the right-hand front seat.



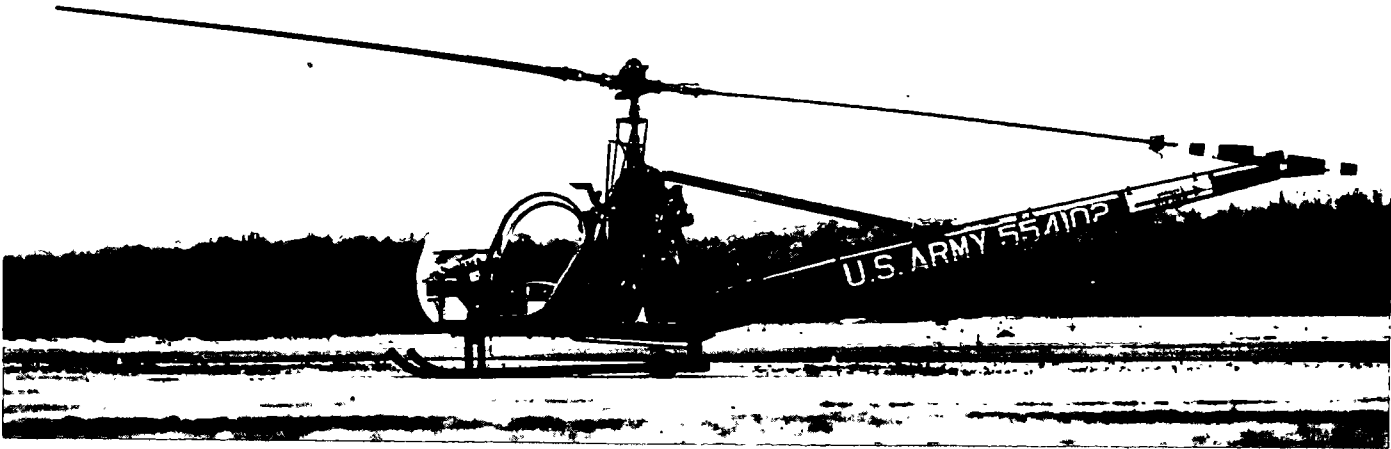
The H-13H SIOUX is used for observation, reconnaissance, rescue, and general utility.



The H-19 CHICKASAW is used for troop and cargo transport.



The H-21 SHAWNEE is used for personnel and cargo transport.



The H-23 RAVEN is a light observation helicopter.



The H-34 CHOCTAW is a light helicopter used for cargo and personnel transport.



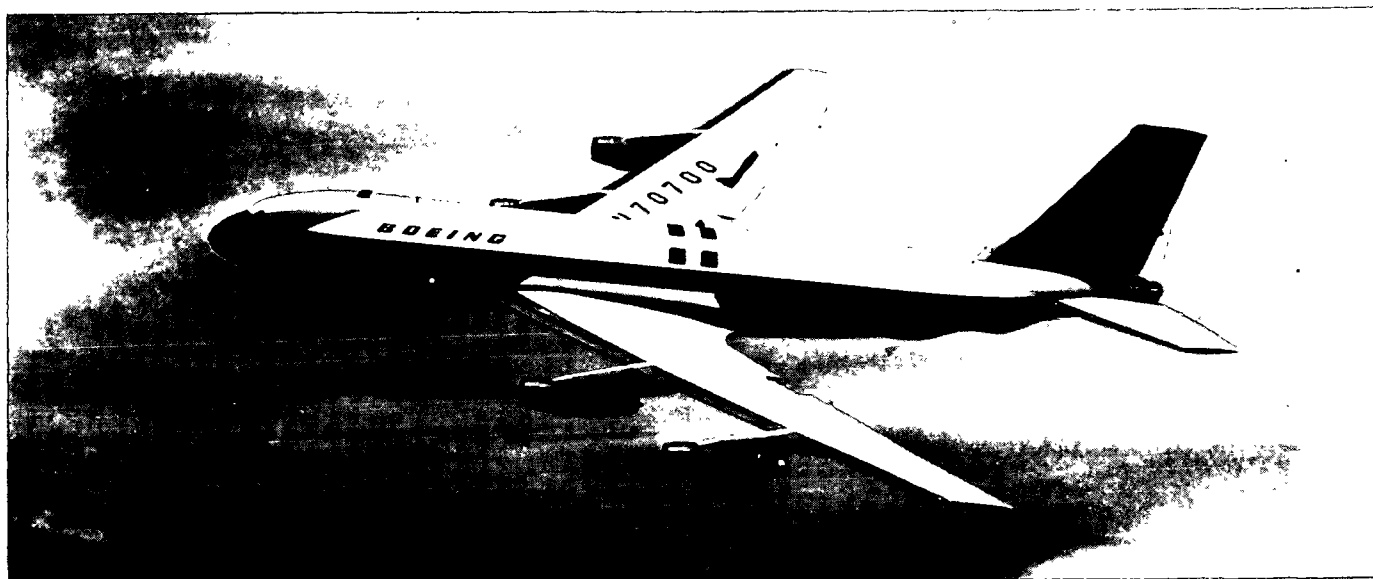
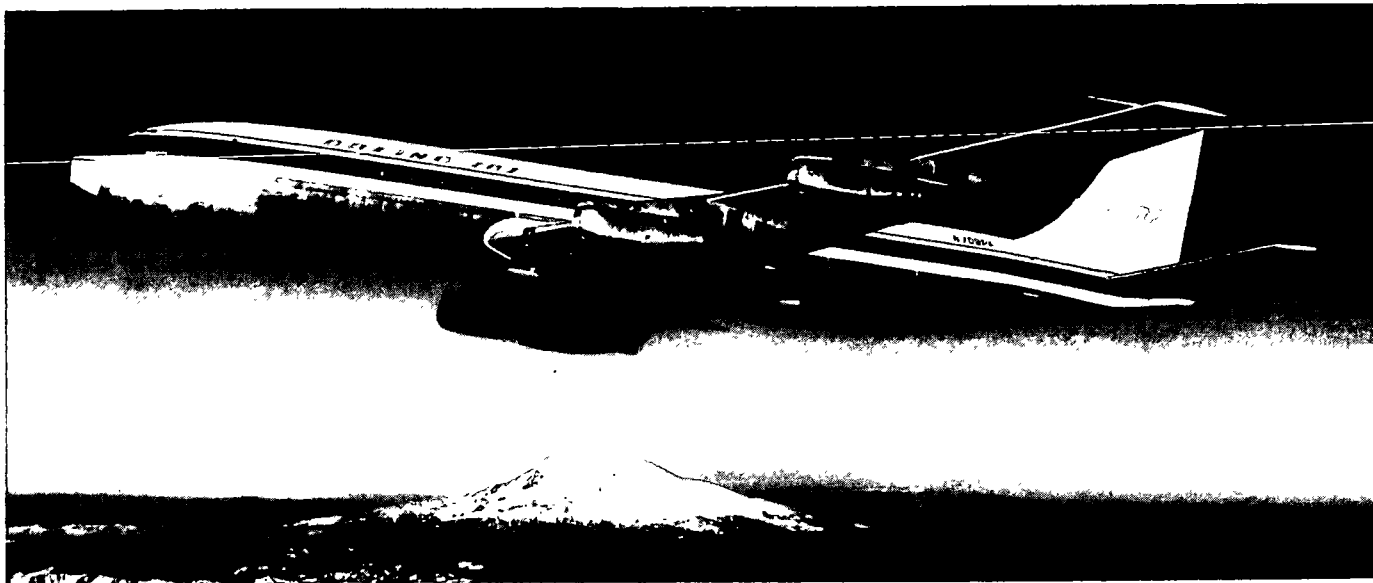
The H-37 MOJAVE is used for transporting cargo, equipment, and troops.



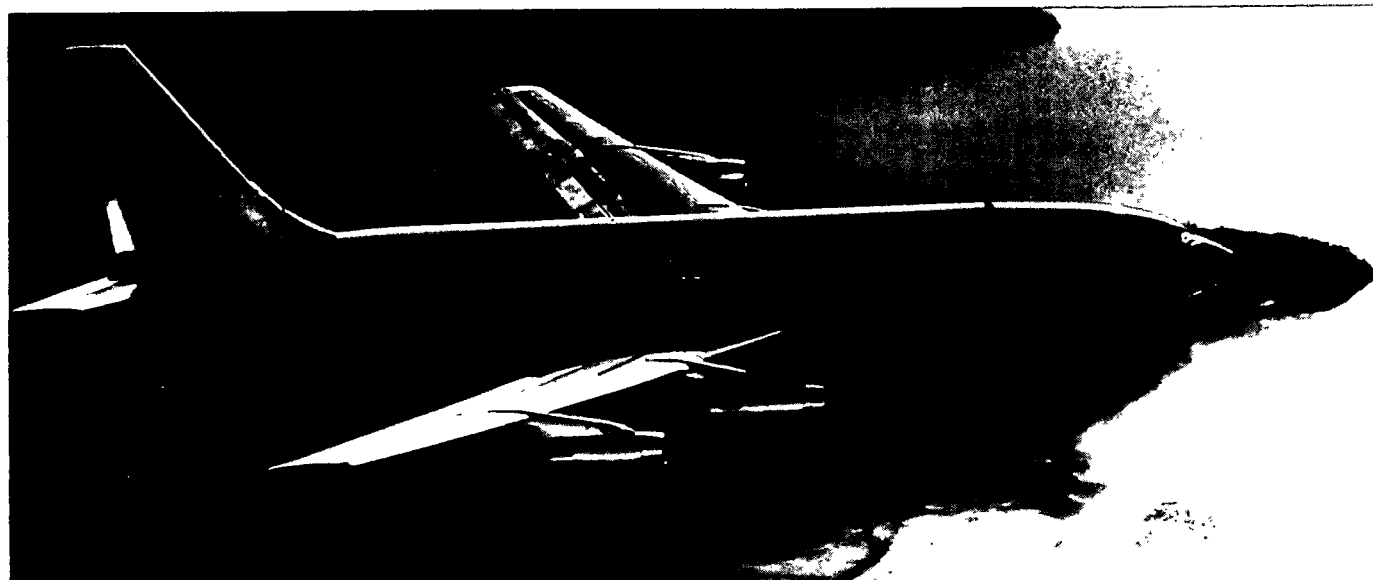
The HC-1B CHINOOK cargo transport has a maximum speed of 150 knots.



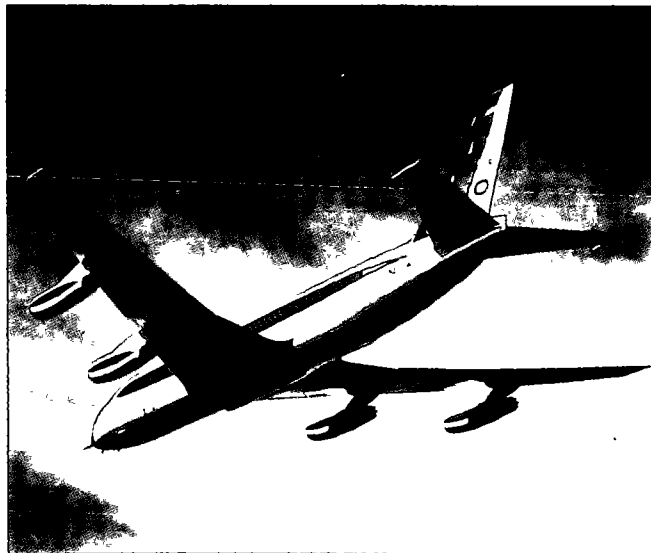
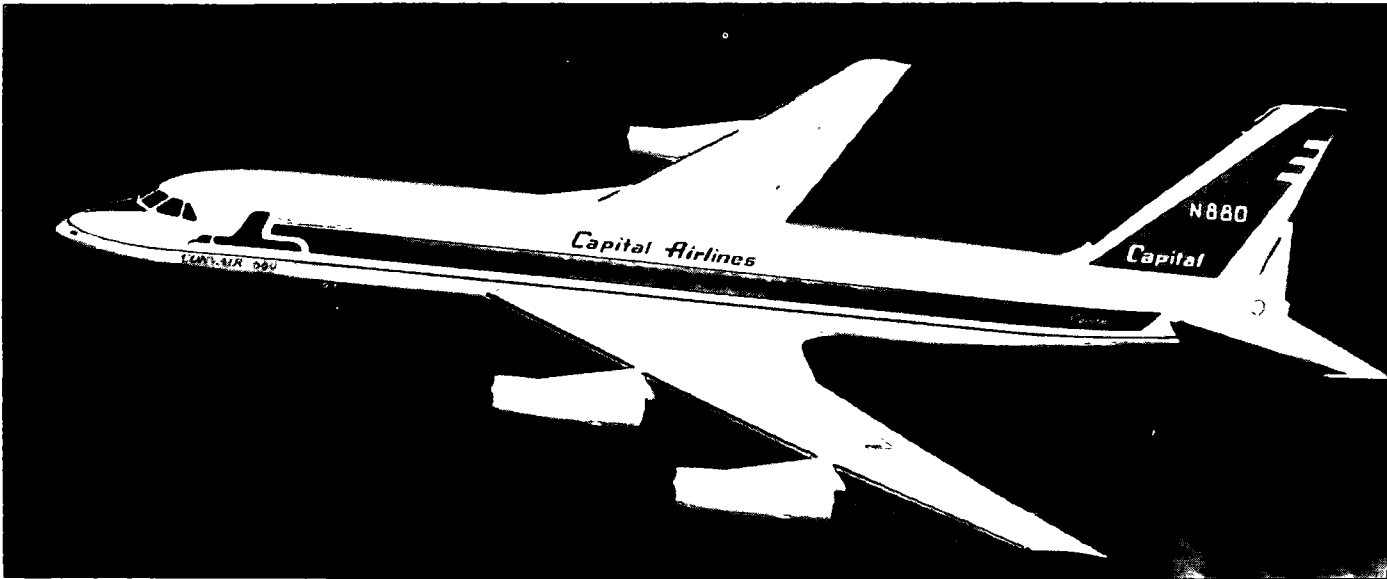
The U-1A OTTER is used for search and rescue operations.



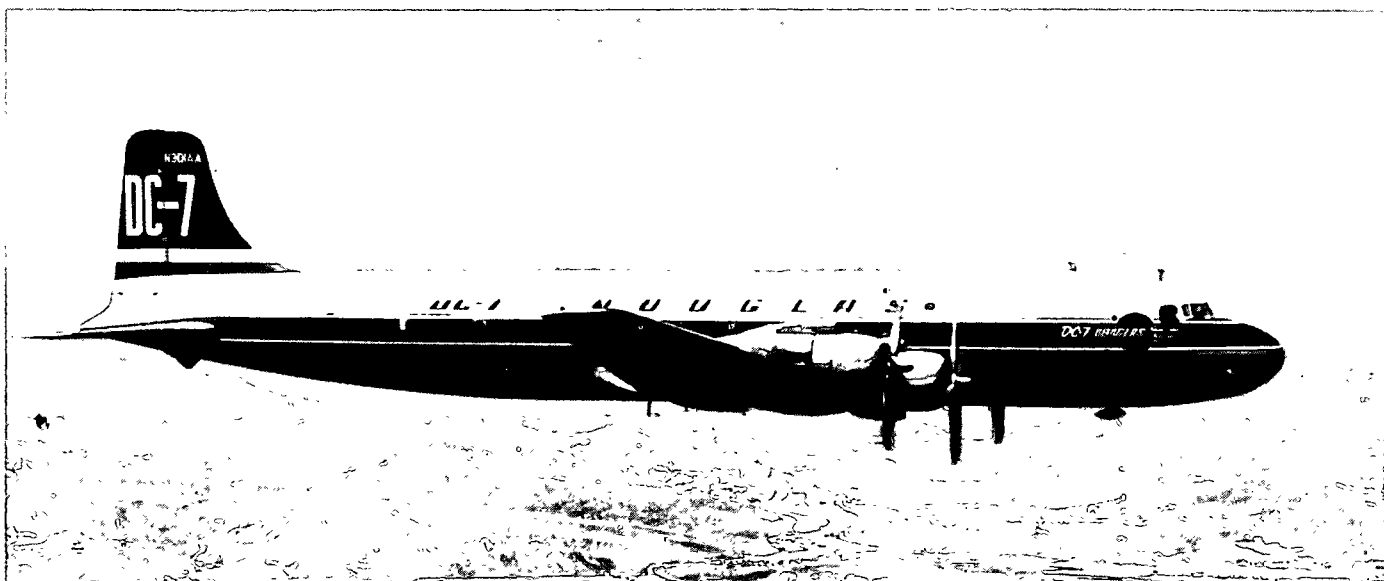
The Boeing 707 jet transport is a civil version of the Air Force KC-135 Stratotanker.



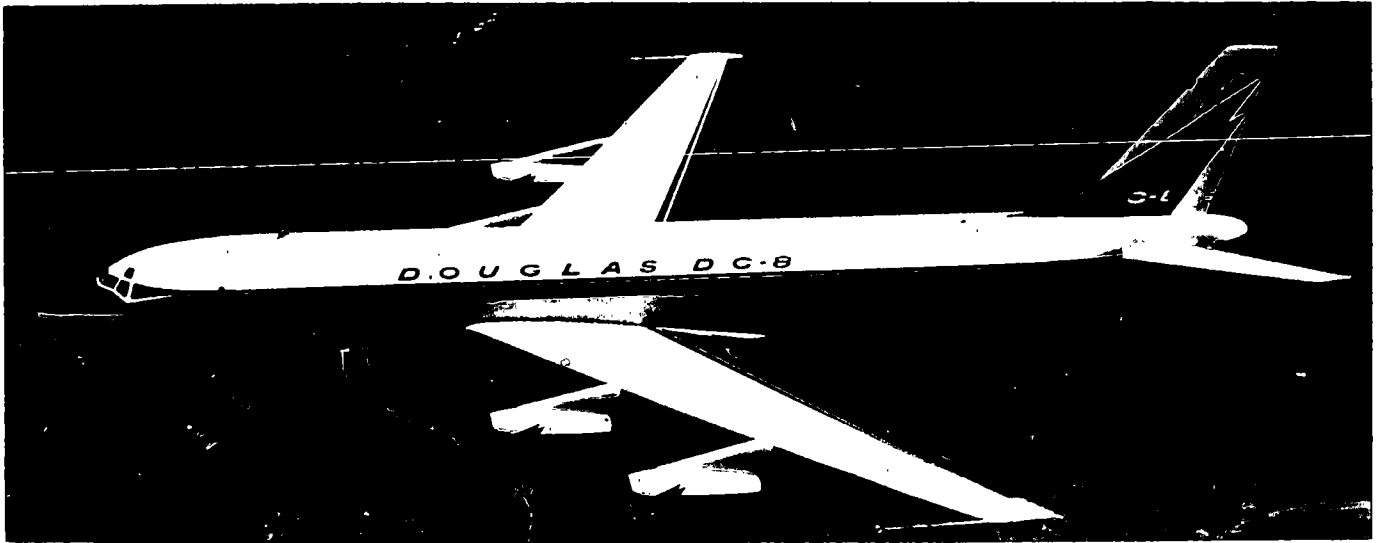
The Boeing 720 is an advanced version of the 707.



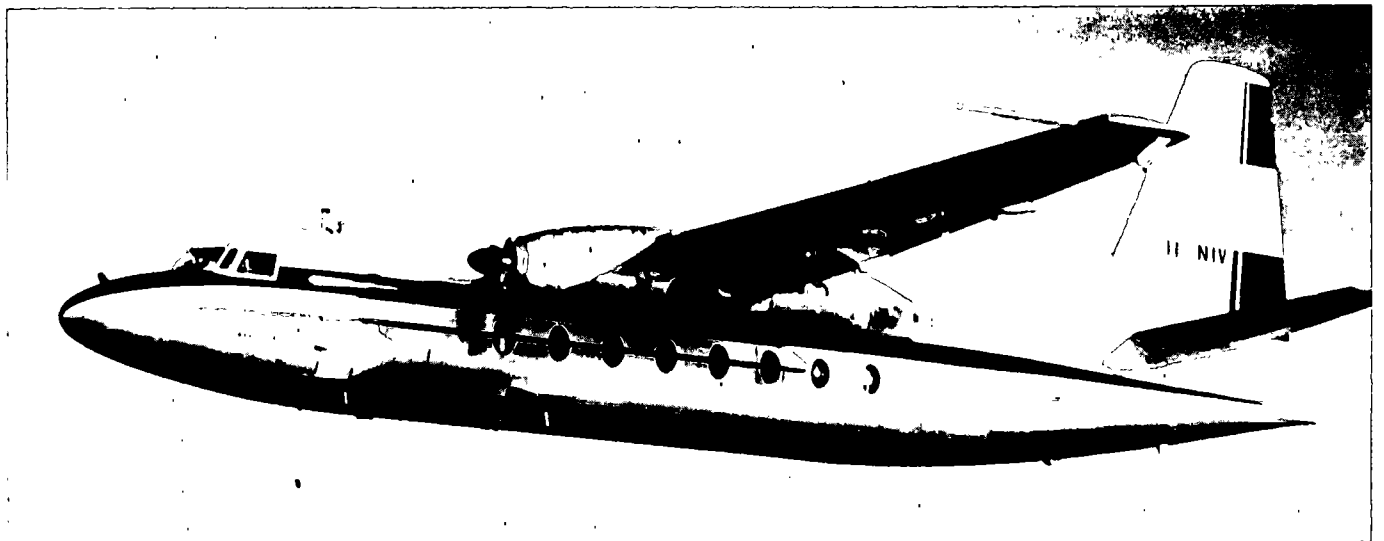
The Convair 880 is a four-jet commercial airliner for medium range routes.



The Douglas DC-7 airliner is a development of the DC-6.

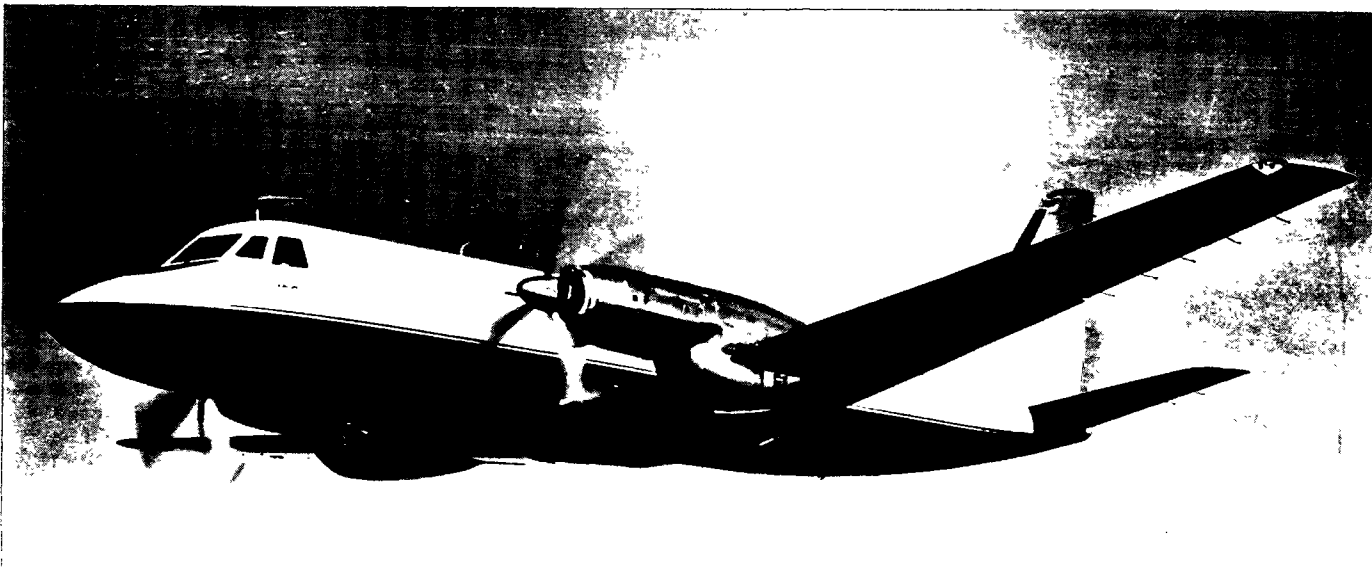


The Douglas DC-8 can accommodate from 118 to 176 passengers.

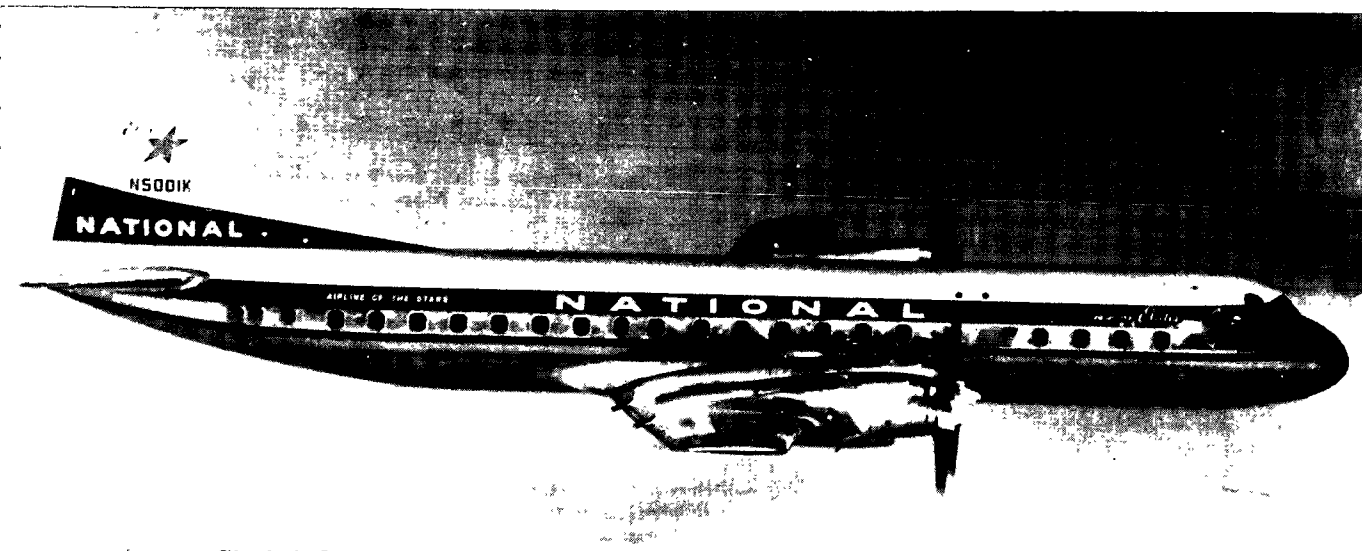


The Fairchild F-27 FRIENDSHIP is an American-built version of the Fokker F-27

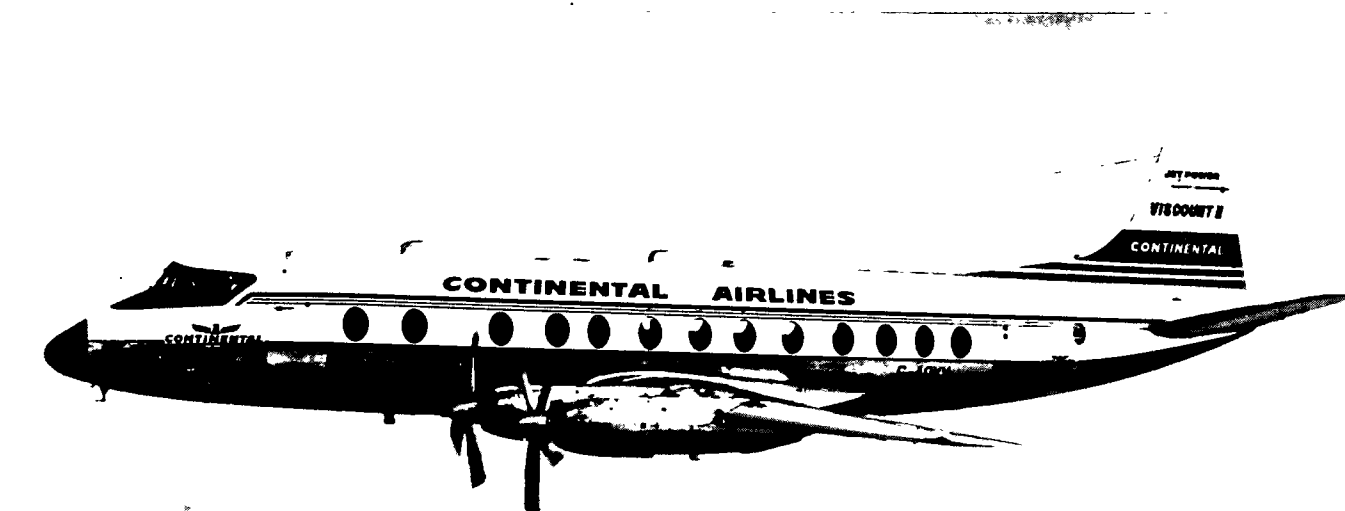




The Grumman GULFSTREAM is a twin-engine, medium-range transport.



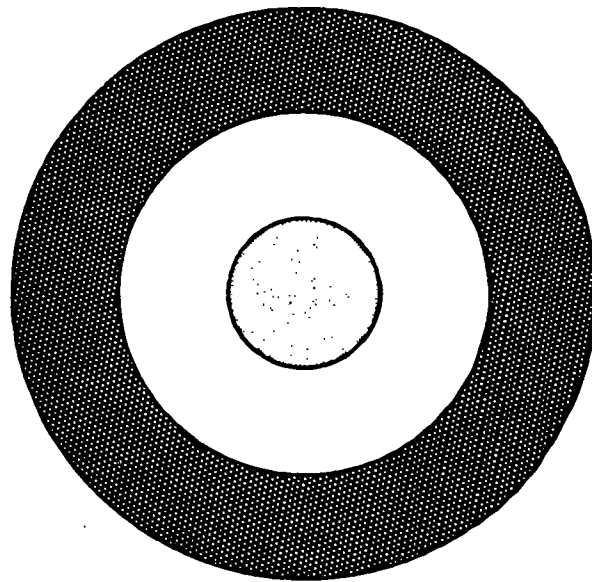
The Lockheed ELECTRA is a four-engine, turboprop airliner.



The Vickers VISCOUNT turboprop transport is used on U.S. airlines.

U.S.
COMMERCIAL

MAJOR
UNITED KINGDOM
AIRCRAFT



U.K.
MAJOR



MAJOR

MAJOR



GREAT BRITAIN

Type	Designation	Manufacturer	Country
Medium Bomber	Valiant	Vickers	U.K.
	Victor	Handley-Page	U.K.
	Vulcan	Avro	U.K.
Light Bomber	Canberra B. 2, 6, 8, 12	English Electric	U.K.
	Canberra PR. 3, 7	English Electric	U.K.
	Canberra PR. 9	Short	U.K.
ASW	Shackleton MR. 1, 2, 3	Avro	U.K.
Fighter	Javelin FAW. 1, 2, 4, 5, 6, 7, 8, 9	Gloster	U.K.
	Lightning F. 1	English Electric	U.K.
	Meteor NF. 11, 12, 14	Gloster	U.K.
	Venom	de Havilland	U.K.
	Hunter F. 4, 6	Hawker	U.K.
	Hunter FGA. 9	Hawker	U.K.
	Meteor F. 8	Gloster	U.K.
	Meteor FR. 9	Gloster	U.K.
	Meteor PR. 10	Gloster	U.K.
	Swift FR. 5	Supermarine	U.K.
	Beverley	Blackburn	U.K.
	Britannia	Bristol	U.K.
	Comet C. 2	de Havilland	U.K.
	Hastings	Handley-Page	U.K.
	Heron	de Havilland	U.K.
Transport	Twin Pioneer	Scottish Aviation	U.K.
	Valetta	Vickers	U.K.
	Anson	Anson	U.K.
Trainer	Auster	Auster	U.K.
	Balliol	Boulton-Paul	U.K.
	Canberra T. 4	English Electric	U.K.
	Canberra T(A1). 11	English Electric	U.K.
	Chipmunk T. 10	de Havilland	U.K.
	Comet T. 2	de Havilland	U.K.
	Gnat	Folland	U.K.
	Hunter T. 7	Hawker	U.K.
	Javelin T. 3	Gloster	U.K.
	Jet Provost	Hunting	U.K.
	Lightning T. 4	English Electric	U.K.
	Meteor T. 7	Gloster	U.K.
	Provost	Hunting	U.K.
	Shackleton T. 4	Avro	U.K.
	Valetta T. 3, 4	Vickers	U.K.
	Vampire T. 11	de Havilland	U.K.
	Varsity T. 1	Vickers	U.K.
	Belvedere	Westland/Bristol	U.K.
	Dragonfly	Westland/Sikorsky	U.K.
	Skeeter	Westland/Saro	U.K.
Helicopter	Sycamore	Westland/Bristol	U.K.
	Whirlwind	Westland/Yeovil	U.K.
	Anson	Anson	U.K.
Miscellaneous	Auster	Auster	U.K.
	Beaufighter TT. 10	Bristol	U.K.
	Beaver	de Havilland	Canada

Type	Designation	Manufacturer	Country
Miscellaneous—Con.	Devon.....	de Havilland.....	U.K.
	Mosquito TT. 35.....	de Havilland.....	U.K.
	Pembroke.....	Hunting.....	U.K.
	Pioneer.....	Prestwick.....	U.K.

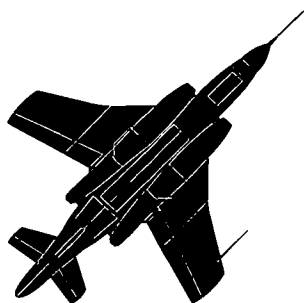
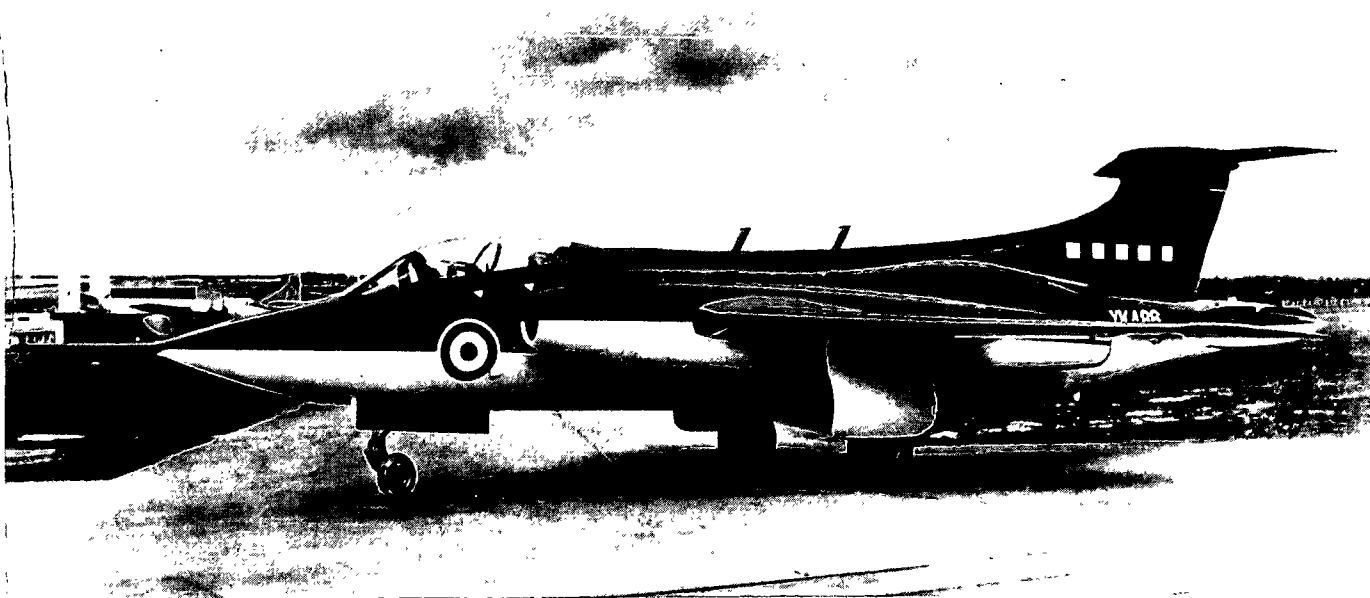
GREAT BRITAIN (FLEET AIR ARM)

Naval Aviation

British Fleet Air Arm is administered by the Board of Admiralty through the Fifth Sea Lord (Air), who is a Vice Admiral. A Vice Admiral, subordinate to the Fifth Sea Lord (Air), is the Flag Officer (Air) (Home), and there is a Vice Admiral Commanding the Reserves.

Fleet Air Arm afloat and overseas is administered by the various Commands, the second in command of which is usually a Vice Admiral (Air).

Type	Designation	Manufacturer	Country
Lt Bmr/Tac/Attack.....	Buccaneer.....	Blackburn.....	U.K.
	ASW.....	Fairey.....	U.K.
	Fighter.....	Gloster.....	U.K.
	Scimitar F. 1.....	Supermarine.....	U.K.
Trainer.....	Sea Hawk FB. 3, 5.....	Hawker.....	U.K.
	Sea Hawk FGA. 4, 6.....	Hawker.....	U.K.
	Sea Venom FAW. 20, 21, 22.....	de Havilland.....	U.K.
	Sea Vixen FAW. 1.....	de Havilland.....	U.K.
	Dominie.....	de Havilland.....	U.K.
	Gannet T. 2, 5.....	Fairey.....	U.K.
	Hunter T. 8.....	Hawker.....	U.K.
	Meteor T. 7.....	Gloster.....	U.K.
	Sea Balliol T. 21.....	Boulton/Paul.....	U.K.
	Sea Prince T. 1.....	Percival.....	U.K.
	Sea Vampire T. 22.....	de Havilland.....	U.K.
	Tiger Moth.....	de Havilland.....	U.K.
Warning.....	Gannet AEW. 3.....	Fairey/Westland.....	U.K.
	Skyraider AEW. 1.....	Douglas.....	U.S.A.
Helicopter.....	Dragonfly HR. 3, 5.....	Westland/Sikorsky.....	U.K.
	HT 1.....	Hiller.....	U.S.A.
	Wesscx.....	Westland/Yeovil.....	U.K.
	Whirlwind HAR. 1, 3, 21.....	Westland/Yeovil.....	U.K.
Miscellaneous.....	Whirlwind HAS. 7, 22.....	Westland/Yeovil.....	U.K.
	Meteor TT. 20.....	Gloster.....	U.K.
	Sea Devon.....	de Havilland.....	U.K.
	Sea Prince.....	Percival.....	U.K.

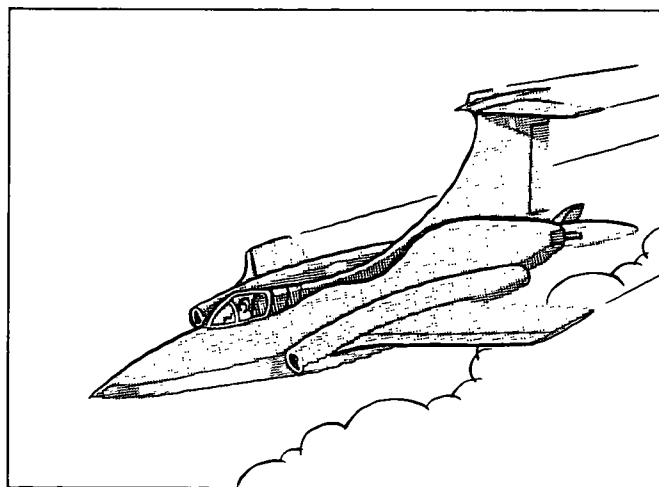
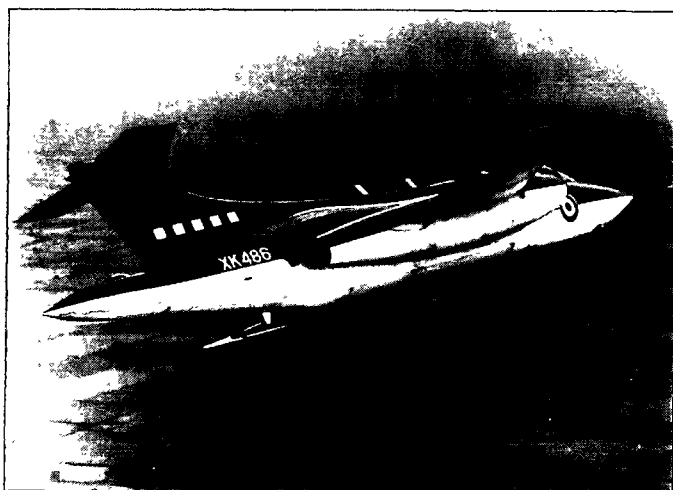
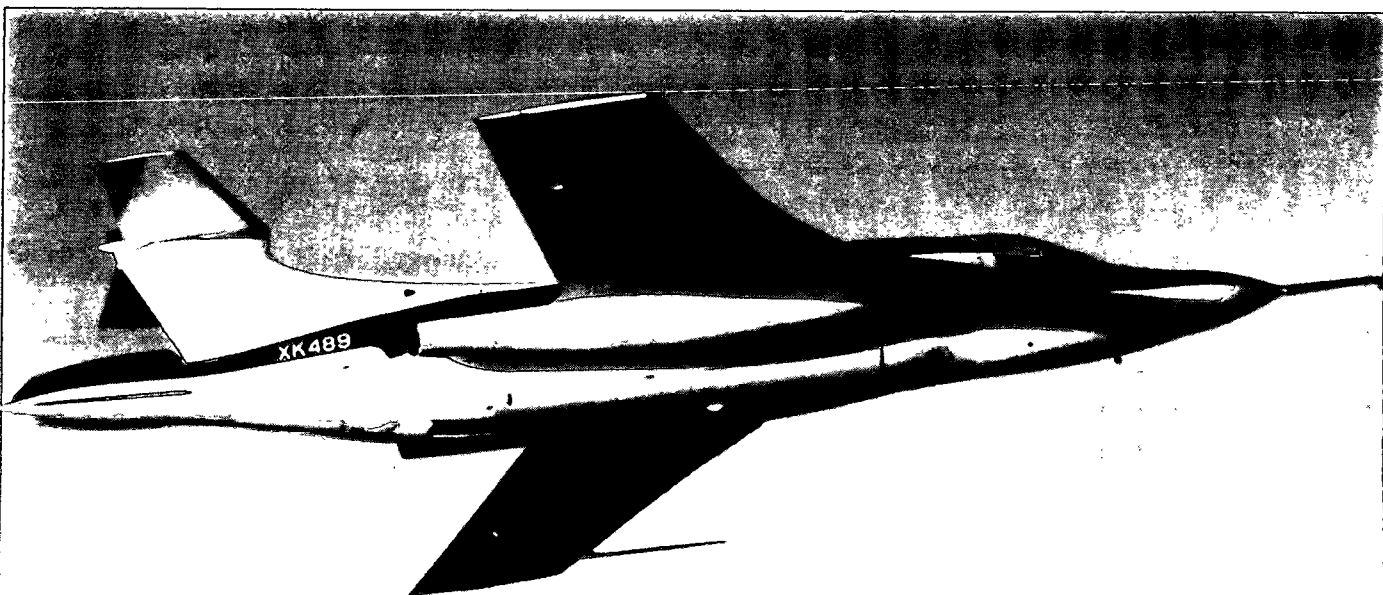
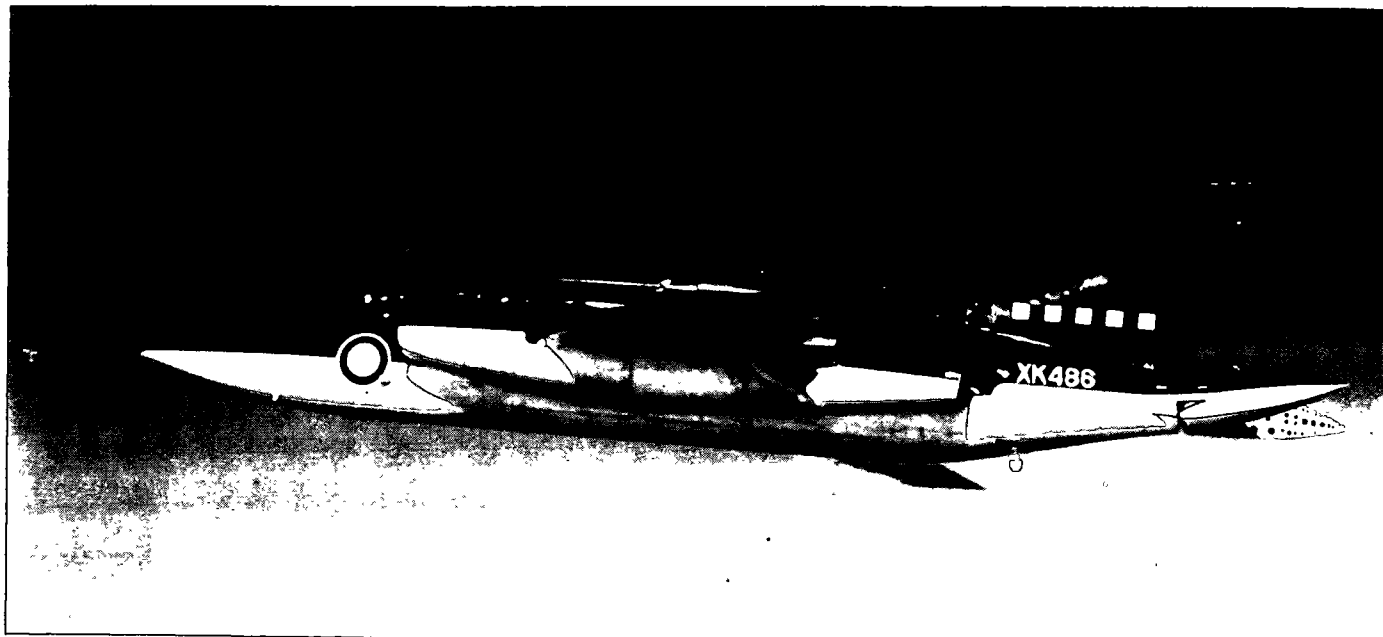


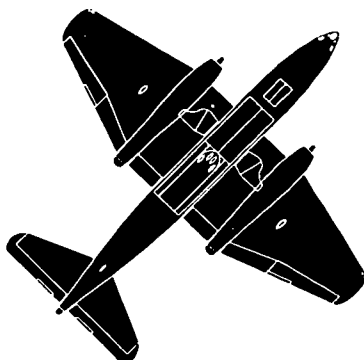
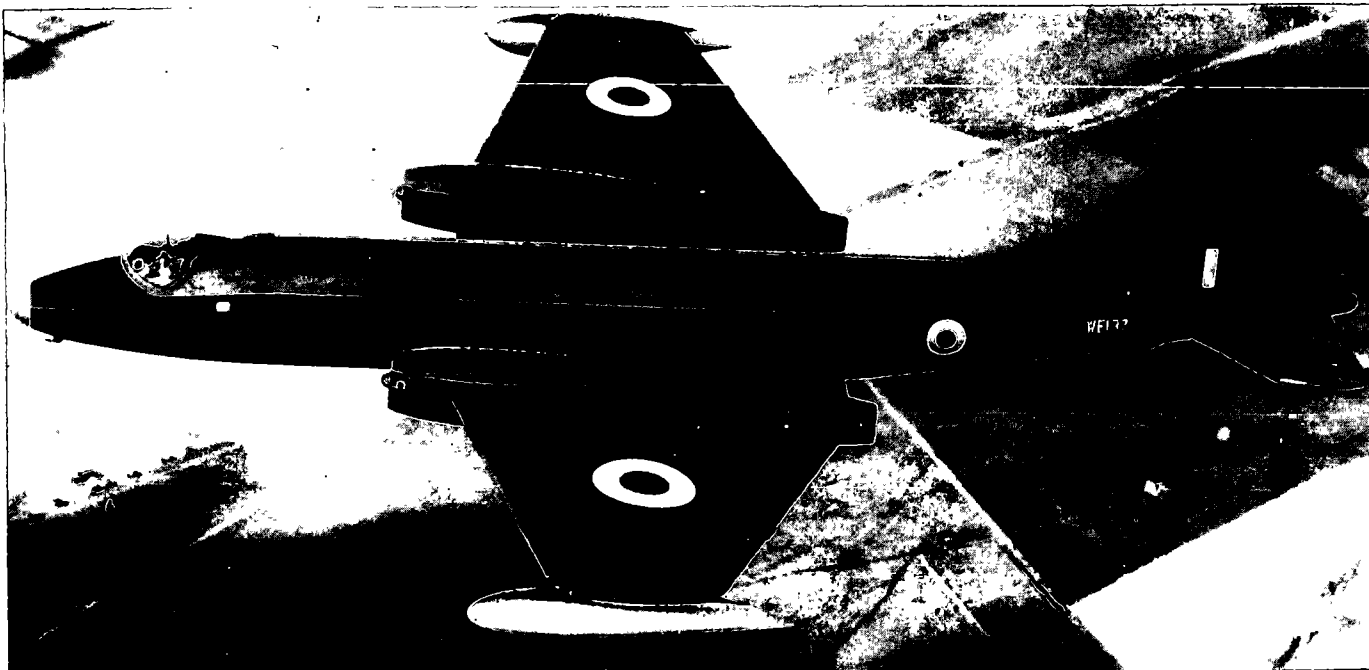
The Buccaneer (initially designated the N.A. 39) is a twin-jet, transonic, low-level strike aircraft developed for the Royal Navy and capable of operating from standard British aircraft carriers. This aircraft might perhaps be most aptly described as "curvaceous." The fuselage begins with a sleek upward-sloping conical radome from which a slightly bulbous canopy, enclosing the two crew members seated in tandem, emerges. The canopy blends into a thick dorsal fairing which, in its turn, eventually sweeps upward into the vertical stabilizer. The two engine nacelles, with circular air intakes and jet outlets, are essentially straight tubes set close to the fuselage sides. The broad, midmounted wing is square-tipped and moderately swept, with pronounced camber; its leading edge is faired forward into a large auxiliary air intake at the nacelle juncture, giving a suggestion of crescent shape. Aft of the wing, the fuselage has a massive area rule bulge above and below. Apart from the curved dorsal fairing, the vertical stabilizer shows little sweep. The horizontal stabilizer, mounted almost at the tip of the vertical fin, is square-tipped and moderately swept. Extending aft from the stabilizer root, the tail cone can open outward into two tweezer-shaped doors which form effective air brakes. A variety of weapons, including nuclear stores, can be accommodated in the large fuselage bomb bay which has a rotating door; there is no gun armament.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	BLACKBURN	Max. Range (Naut Miles)	870	No of Engines	2
Wing Span	42'6"	Crew No.	2	Model No.	Gyron-Junior DGJ.1
Length	62'4"	Max. Speed (Knots)	Mach 0.95	Mfr.	DE HAVILLAND
Combat Weight (Lbs.)	42,000 est.	Service Ceiling (Ft.)		Type	Turbojet
				Rating Each	7,000 #

BUCCANEER

BLACKBURN





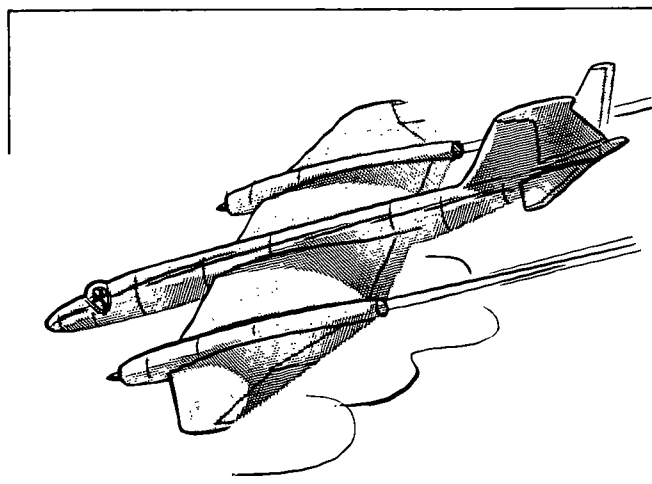
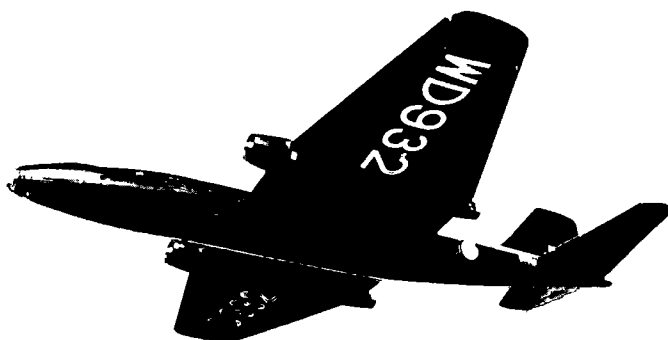
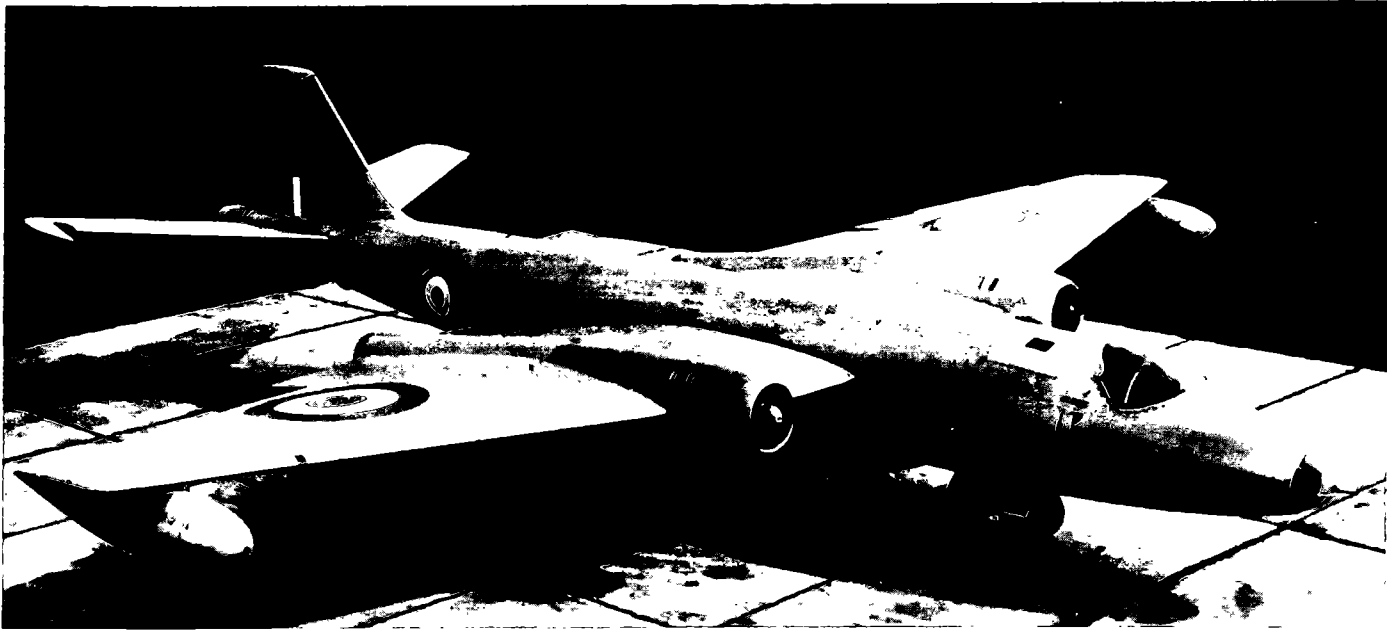
The twin-jet Canberra, the first British jet bomber, was developed to meet the requirements for a high-altitude light bomber which would rely entirely on speed and high performance for defense at its operating altitude. The fuselage is cigar-shaped with a jettisonable teardrop canopy situated in the nose section. The most unconventional feature of the Canberra is the variable-incidence stabilizer for positive control at high speeds. At least thirteen different versions have been built, including three photo reconnaissance models: the PR. 3, adapted from the B. 2 bomber; the PR. 7, adapted from the B. 6; and the substantially modified PR. 9. In some versions a dorsal fin fairing is fitted, and in the B. 2 there is a transparent nose. The B. 8 has an offset canopy and four 20-mm cannon carried in a detachable fairing beneath the bomb bay. The PR. 9 has an extended-span wing with squared tips and extra width on the center section, plus a different cockpit enclosure. All versions may carry tip tanks. The Canberra has been used by the RAF, the RAAF, the USAF, and the air forces of India, France, Venezuela, Ecuador, Peru, New Zealand, Rhodesia and Sweden; in the United States it was manufactured by Martin for the USAF under the designation B-57.

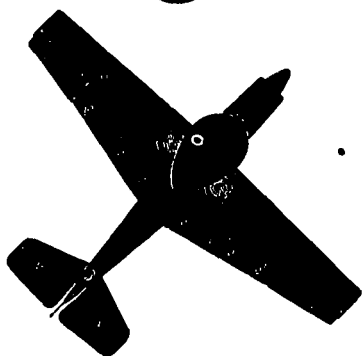
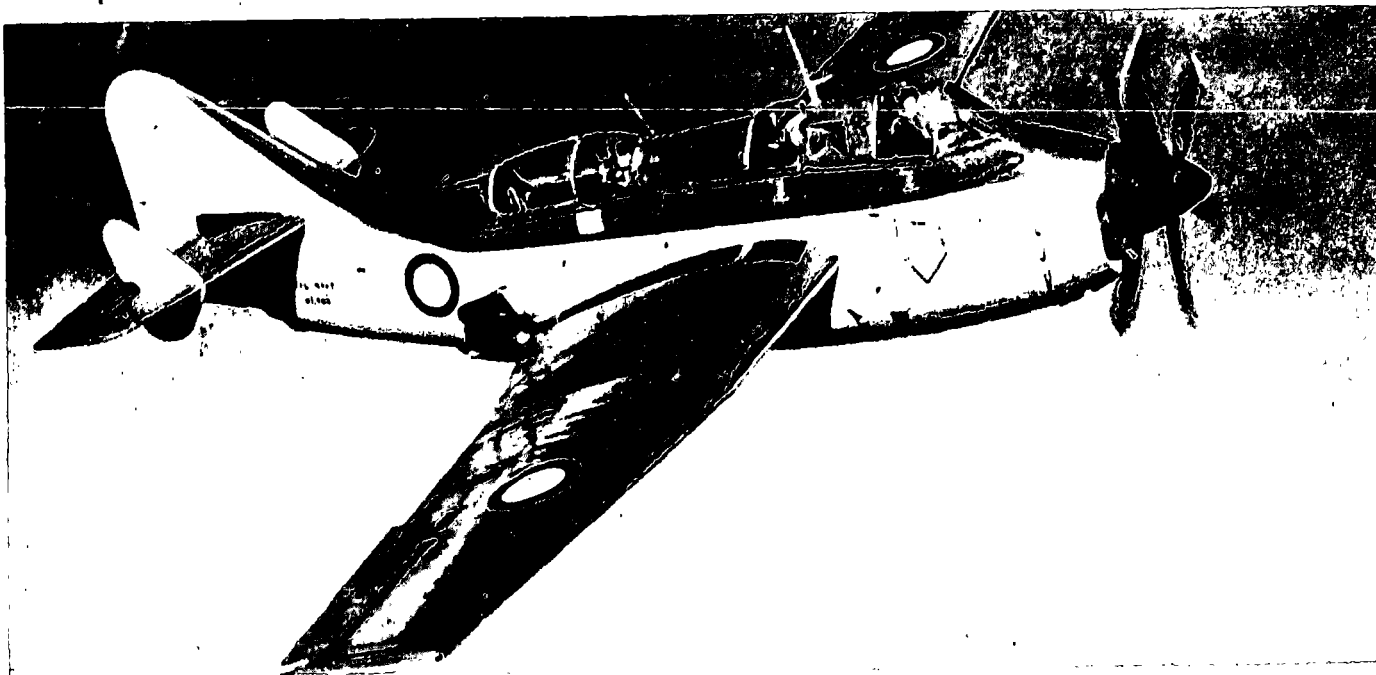
DATA APPLY TO CANBERRA B(1).8

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	ENGLISH ELECTRIC	Max. Range (Naut. Miles)	3,100	Na. of Engines	2
Wing Span	63'11"	Crew No.	2	Model No.	Avon 109
Length	65'6"	Max. Speed (Knots)	540	Mfr.	ROLLS ROYCE
Combat Weight (lbs.)	53,800 approx.	Service Ceiling (ft.)	48,000	Type	Turbojet
				Rating Each	7400 #

CANBERRA

ENGLISH ELECTRIC





AEW. 3

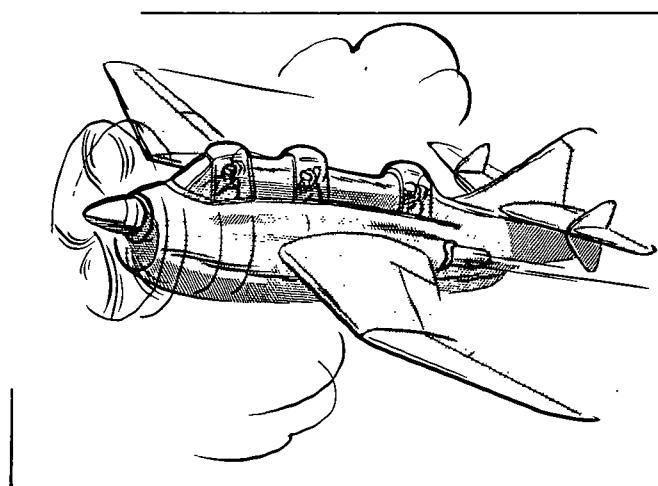
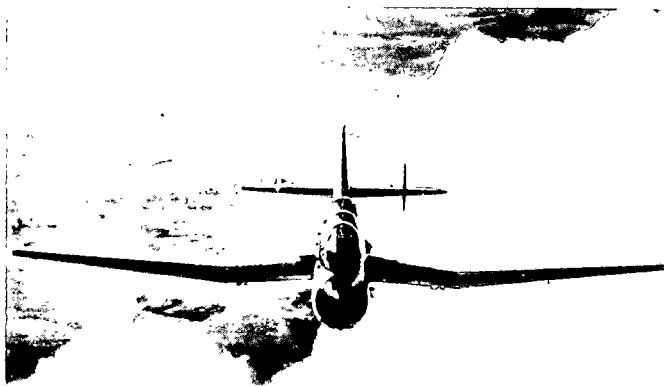
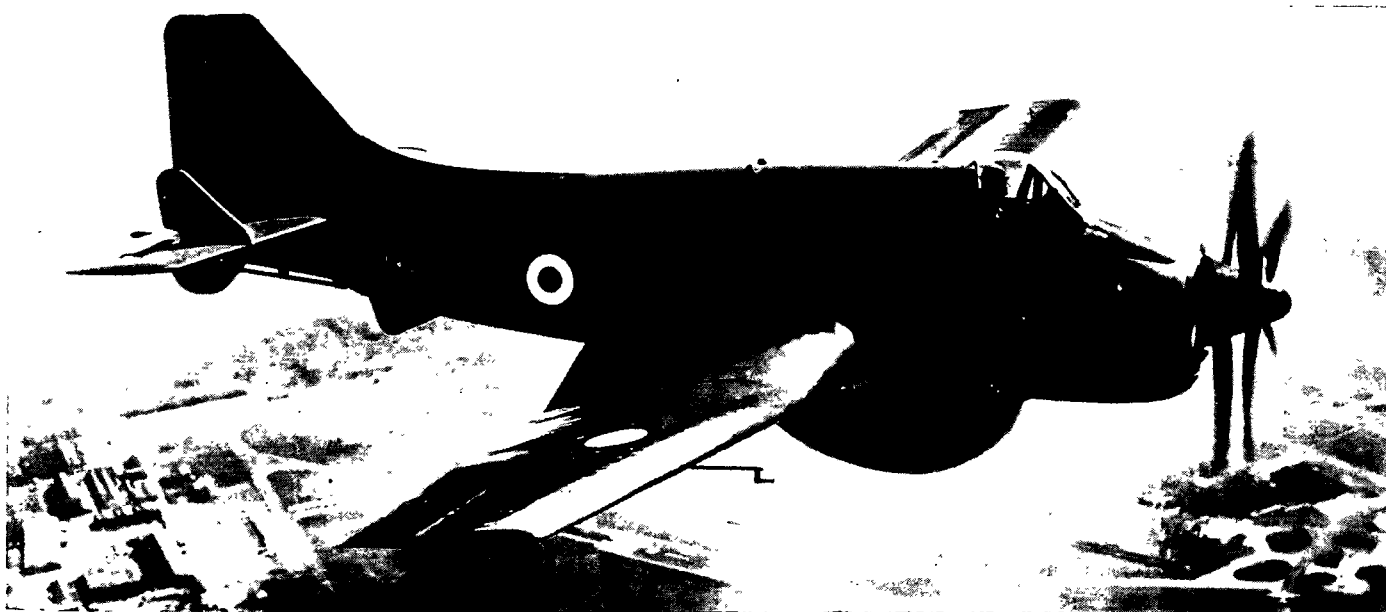
The carrier-based Gannet has been produced for the Royal Navy in five different versions: the AS. 1 and AS. 4 for antisubmarine duties, the T. 2 and T. 5 trainers, and the AEW. 3 for early warning. It features a Double Mamba turboprop engine coupled to coaxial four-bladed propellers; for long range cruising, one of the two units can be shut down. The aircraft is equipped with catapulting attachments, an arresting hook, and powered folding wings with each wing doubly hinged to permit more efficient storage. Characteristic of all versions are a somewhat tubby fuselage, an inverted gull wing, and twin auxiliary finlets on the tail assembly. Other features, of the antisubmarine Gannet, are a short sloping nose for search visibility, a retractable ventral radome, and a long bomb bay for carrying buoys, depth charges, or torpedoes. The three crew members sit in tandem in separate cockpits. While generally resembling the antisubmarine version, the Gannet trainers lack the ventral radome. In the AEW. 3, the last version to enter service, the Gannet presents a somewhat different appearance. The two rear cockpits are eliminated and the pilot sits alone above the nose, with two radar observers inside the rear fuselage. The vertical stabilizer has a squared-off top, there is a large radome under the fuselage mid-section, and a new engine nozzle exhausts on each side of the fuselage under the wing's leading edge.

DATA APPLY TO GANNET AS.4

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	FAIREY/WESTLAND	Max. Range (Naut. Miles)	855	No. of Engines	2
Wing Span	54'4"	Crew No.	3	Model No.	Double Mamba
Length	43'	Max. Speed (Knots)	280	Mfr.	BRISTOL SIDDELEY
Combat Weight (Lbs.)	19,600	Service Ceiling (Ft.)	25,000 approx.	Type	Turboprop
				Rating Each	3,935 eshp.

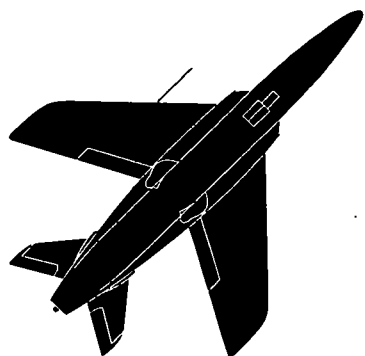
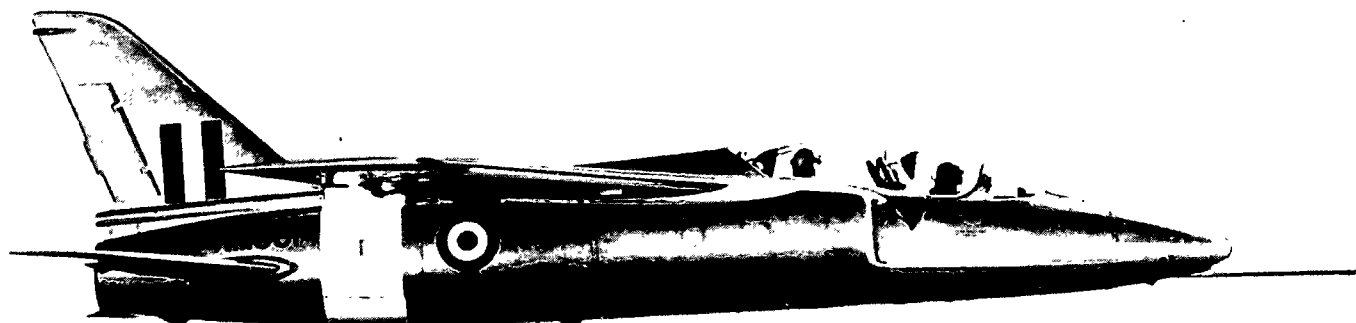
GANNET

FAIREY/WESTLAND



FOLLAND

GNAT



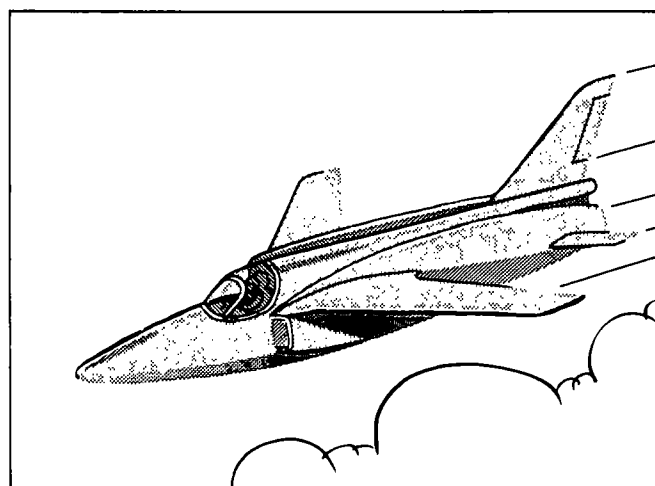
The Gnat is a single-seat, lightweight jet fighter. The aircraft is appropriately named, since it is roughly one-third the weight and one-half the size of standard jet fighters. Recognition features include sweptback wings mounted shoulder high on the fuselage, a pipelike fairing atop the fuselage extending from cockpit to vertical tail surfaces, air-inlet ducts on each side of the fuselage, and a sweptback horizontal stabilizer located on the lower third of the aft fuselage. The Gnat has attained Mach 1 in a shallow dive. The Gnat Trainer, intended eventually to replace the Vampire T. 11 as the standard advanced trainer, is visually distinguished from its fighter forerunner by a rounded nose, larger tail surfaces, increased wing area, and a larger canopy enclosing two seats arranged in tandem.

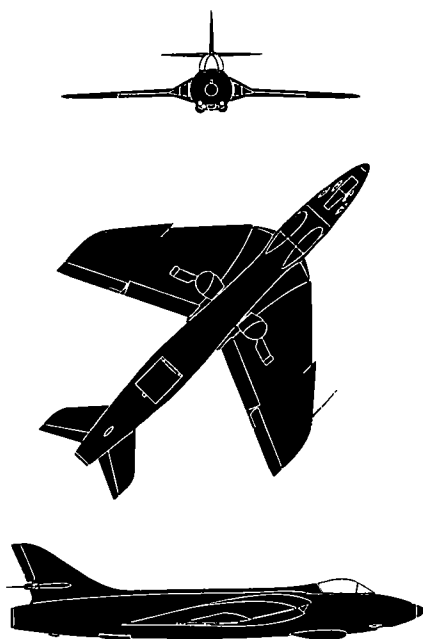
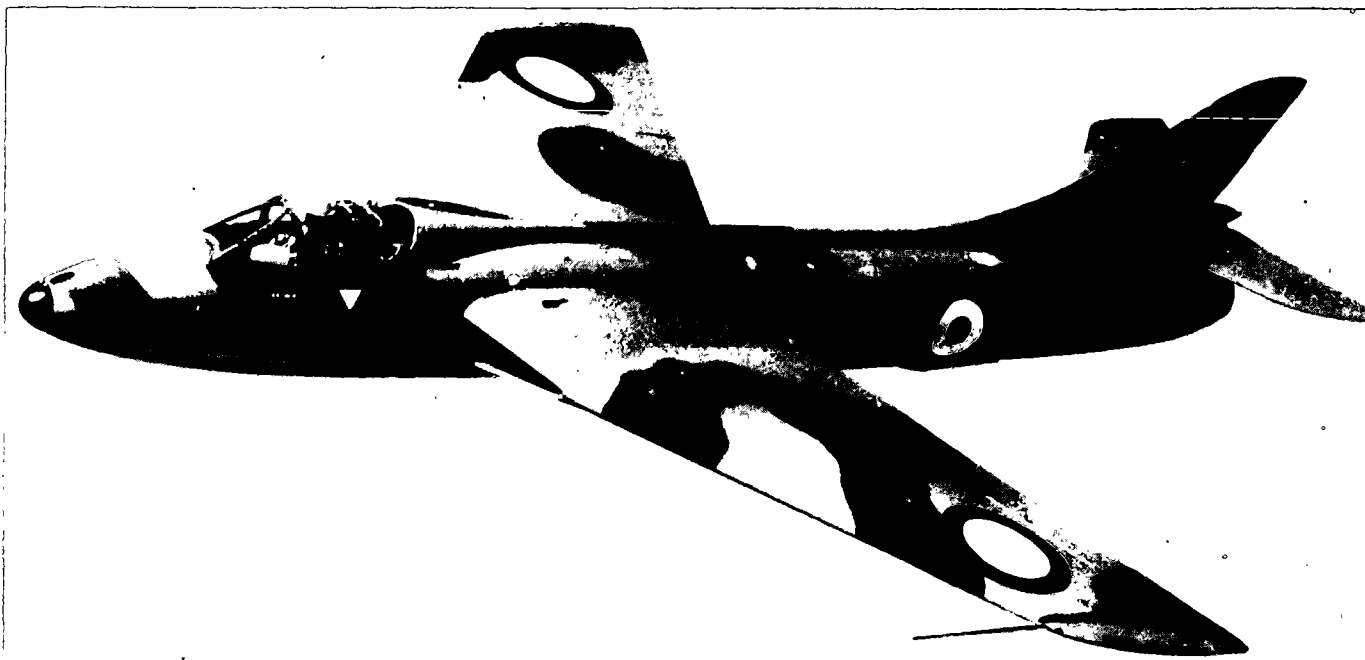
DATA APPLY TO GNAT MK.1

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	FOLLAND	Max. Range (Naut. Miles)	870	No. of Engines	1
Wing Span	22'2"	Crew No.	1	Model No.	Orpheus-701
Length	29'9"	Max. Speed (Knots)	Mach 0.98	Mfr.	BRISTOL-SIDDELEY
Combat Weight (Lbs.)	6,750	Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	4,520

GNAT

FOLLAND





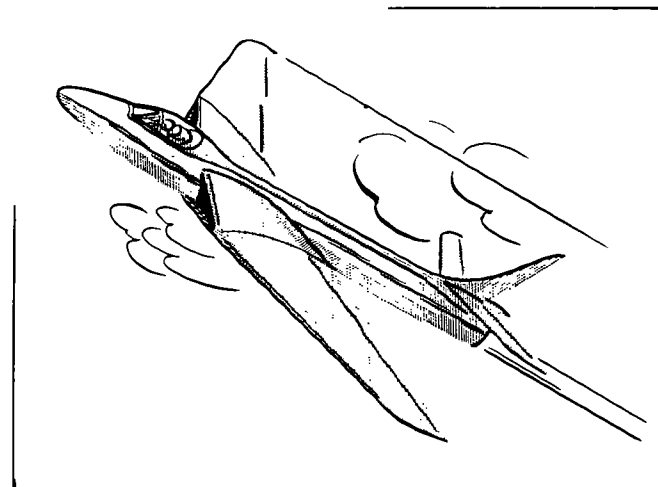
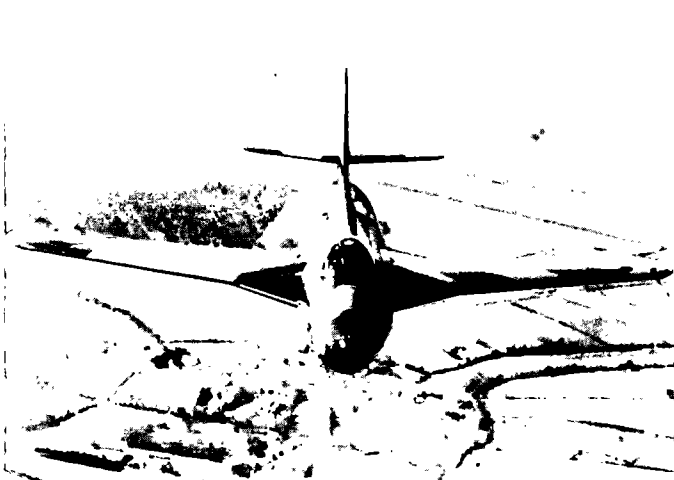
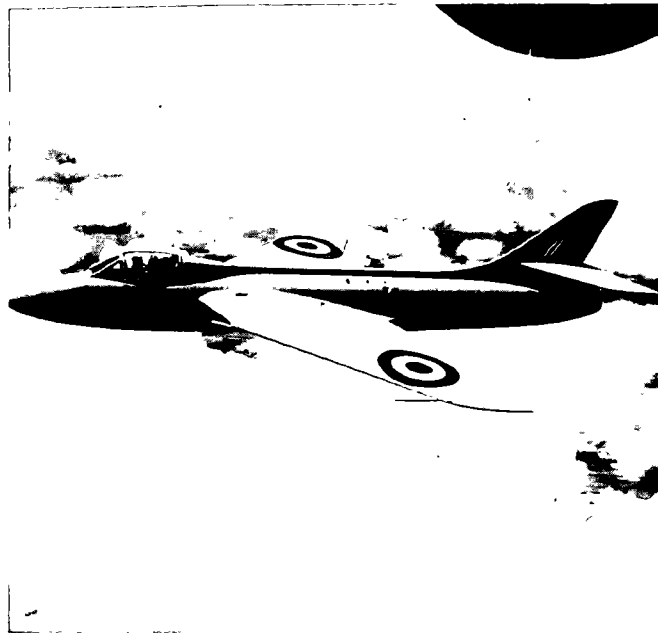
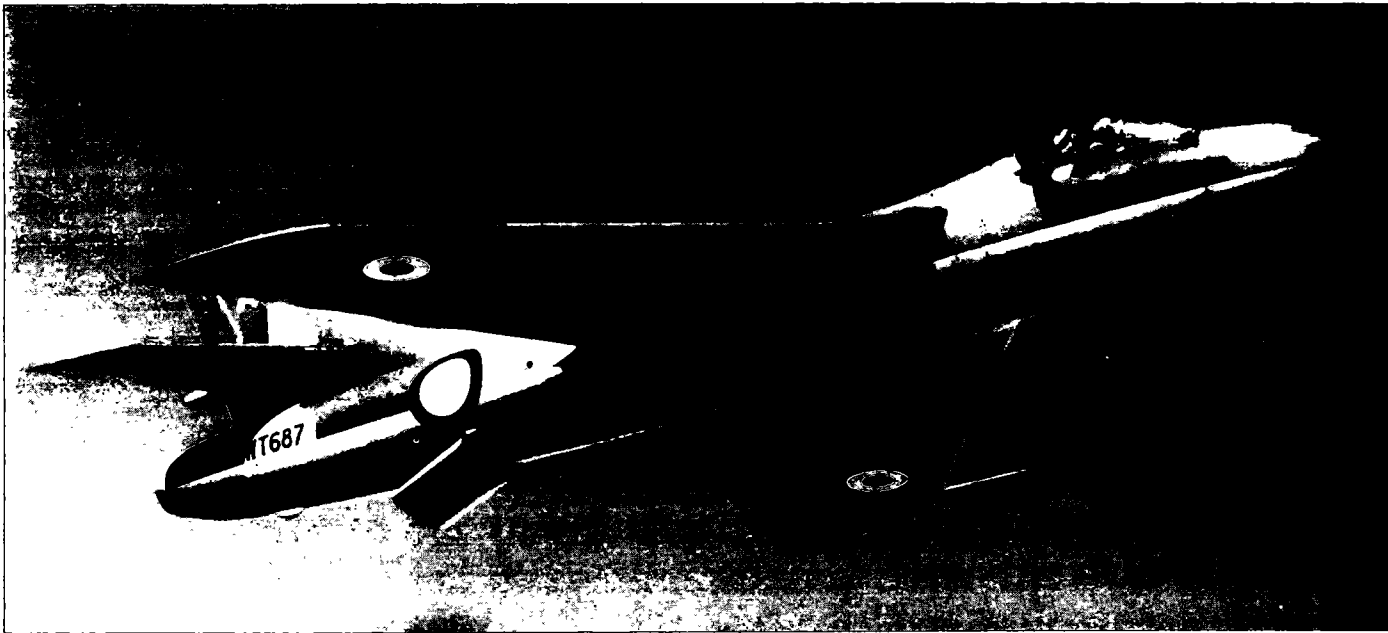
The Hunter is a sweptwing, single-jet fighter first flown in 1951 and since then built in substantial numbers. There are single-seat and two-seat versions for various operational uses and both can carry a variety of external stores and fuel tanks. A recognition feature of the normally single-seat fighter is the extension of the cockpit fairing into an extended dorsal fin leading into the raked vertical stabilizer. The horizontal tail surface is attached to the vertical stabilizer just above the fuselage. A tricycle landing gear is fitted, with the main gear attached to the outer wing panels and folding inward. The nose wheel is directly below the cockpit and retracts backwards. Later versions, beginning with the F. 6, show a sawtooth wing leading edge. Trainer variants, the Royal Air Force's T. 7 and the Fleet Air Arm's T. 8, have a widened cockpit and forward section to accommodate side-by-side seating of two crew members. Specialized development of the F. 6 includes the FGA. 9 attack aircraft and the FR. 10 fighter reconnaissance version for the RAF. The Hunter has been sold to or built in several other countries including Belgium, Denmark, India, Iraq, Jordan, Lebanon, Peru, the Netherlands, Sweden, and Switzerland.

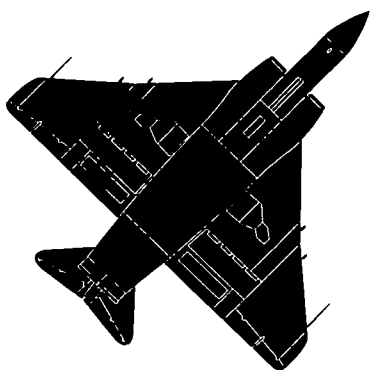
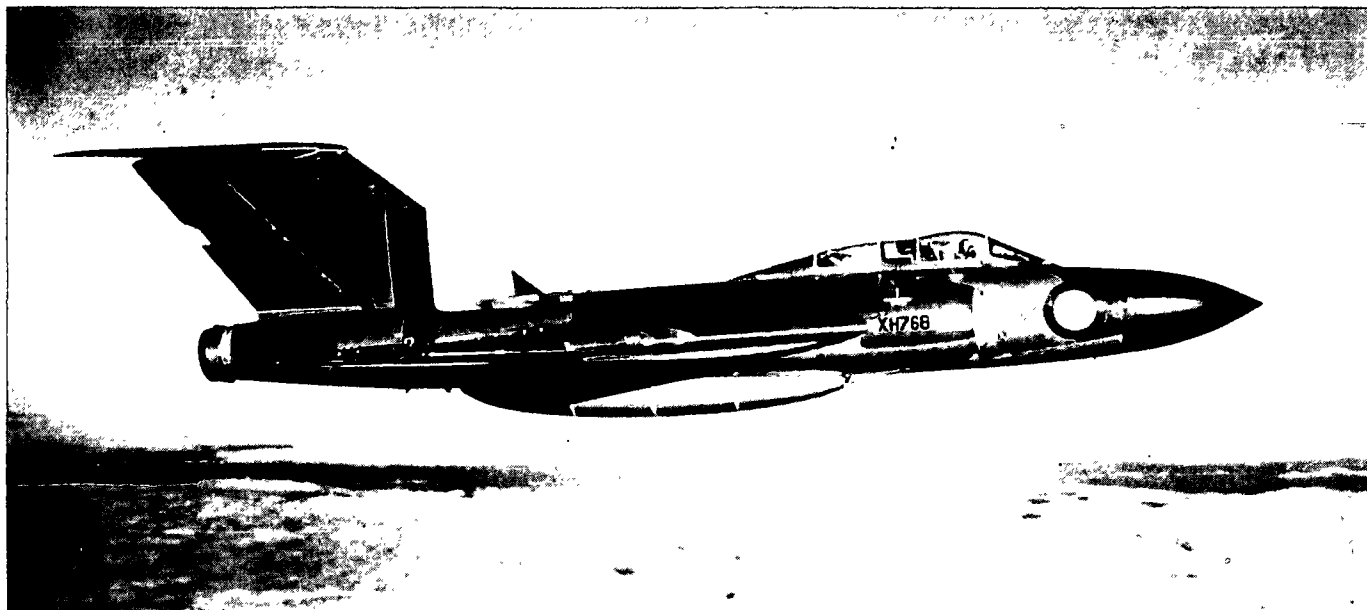
DATA APPLY TO HUNTER F.6

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	HAWKER	Max. Range (Naut. Miles)	1,600 approx.	No. of Engines	1
Wing Span	33'8"	Crew No.	1	Model No.	Avon 203
Length	45'10½"	Max. Speed (Knots)	640 plus	Mfr.	ROLLS ROYCE
Cambat Weight (Lbs.)	20,000 plus	Service Ceiling (Ft.)	55,000	Type	Turbojet
				Rating Each	10,000 #

HUNTER

HAWKER





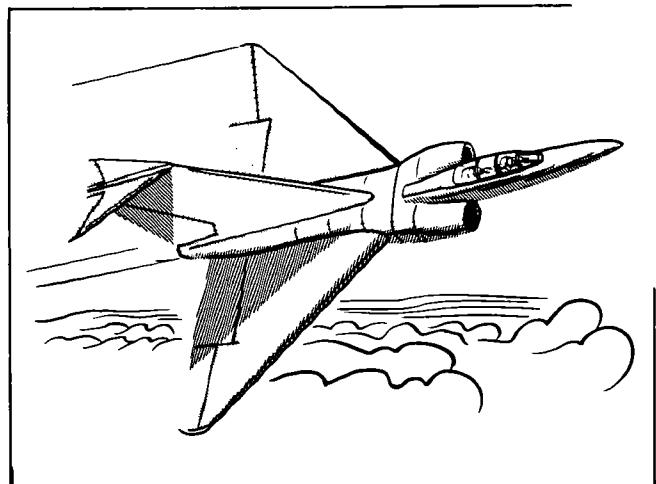
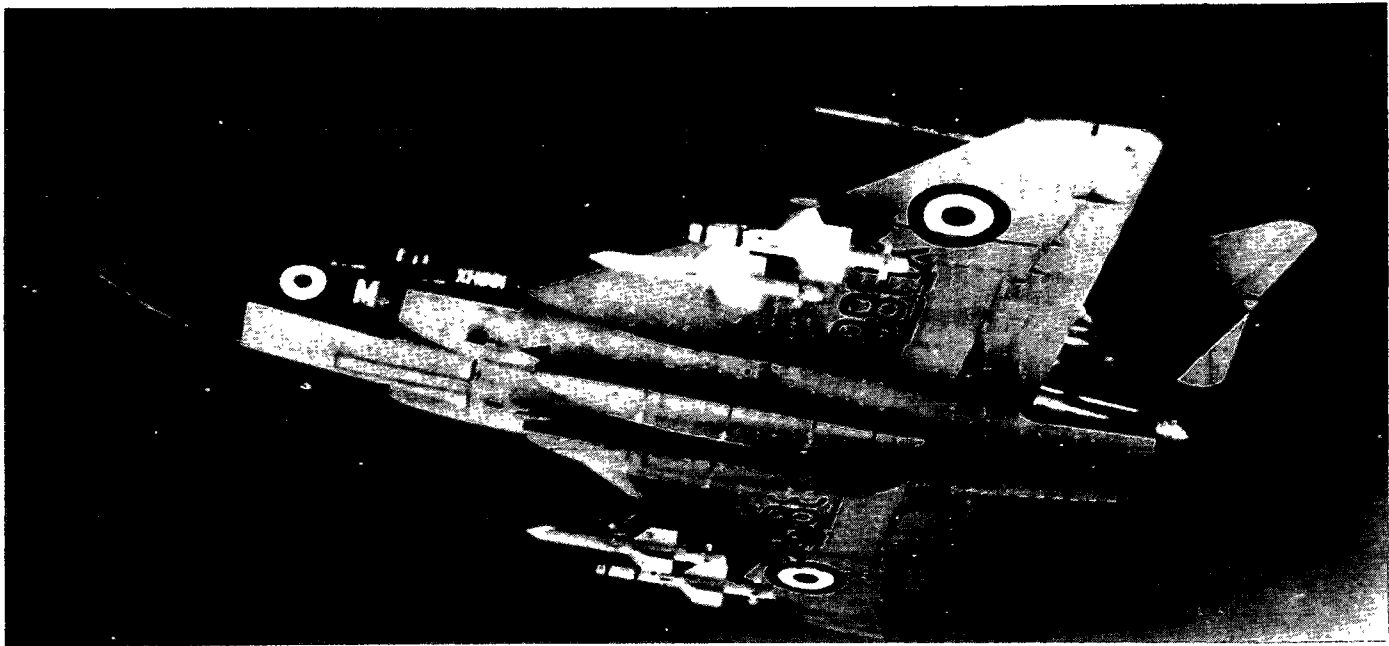
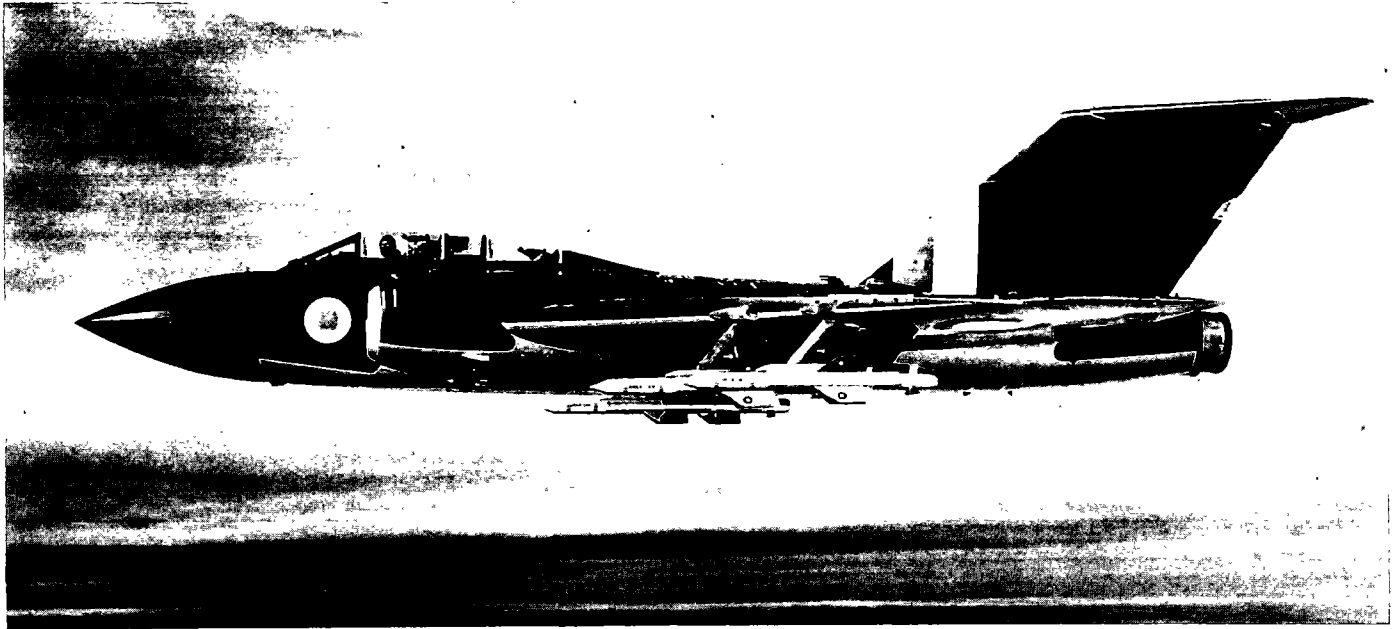
The Javelin was the world's first delta-winged jet fighter, and was designed for all-weather use against high-altitude enemy bombers. Up to July 1960, nine versions had gone into service with the RAF; of these, all except the Mk. 3 trainer variant are all-weather fighters. The different versions were brought about mainly through changes of internal equipment, and for recognition purposes differ little in basic configuration, although the trainer is about five feet longer than the fighter versions. In plan view the aircraft resembles an arrowhead; when viewed in flight from the rear, its flat appearance gives the impression of a striking cobra. The two buried jets protrude forward of the delta wing. The delta-shaped horizontal stabilizer is mounted at the top of the sweptback tail fin and the tricycle landing gear has a wide track, retracting inward. All Javelins are two-seaters; pilot and radar operator sit in tandem in the fully pressurized and heated cockpit, which has a clear-view canopy. Mk. 1-6 are armed with four 30-mm Aden guns mounted in the wings; Mk. 8 and 9 carry two wing-mounted guns which can be supplemented by external stores, including Firestreak missiles, mounted on the aircraft's four detachable underwing pylons. The later versions are equipped with the more powerful Sapphire 200 Series engines with afterburner, and the Mk. 9 is basically a Mk. 7 converted to Mk. 8 standard. For refueling, a large fixed probe can be attached high on the starboard side of the forward fuselage.

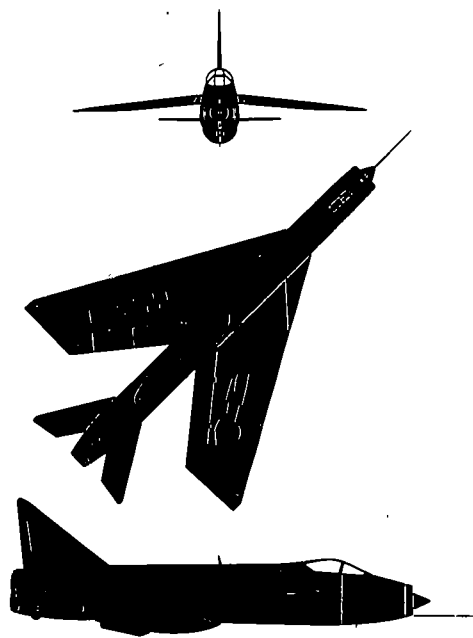
DATA APPLY TO EARLIER MARKS

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	GLOSTER	Mox. Range (Nout. Miles)	500 approx.	No. of Engines	2
Wing Span	52'	Crew No.	2	Model No.	Sapphire 6
Length	57'	Mox. Speed (Knots)	530	Mfr.	ARMSTRONG SIDDELEY
Combat Weight (Lbs.)	30,000 approx.	Service Ceiling (Ft.)	50,000 approx.	Type	Turbojet
				Rating Each	8,000 #

JAVELIN

GLOSTER



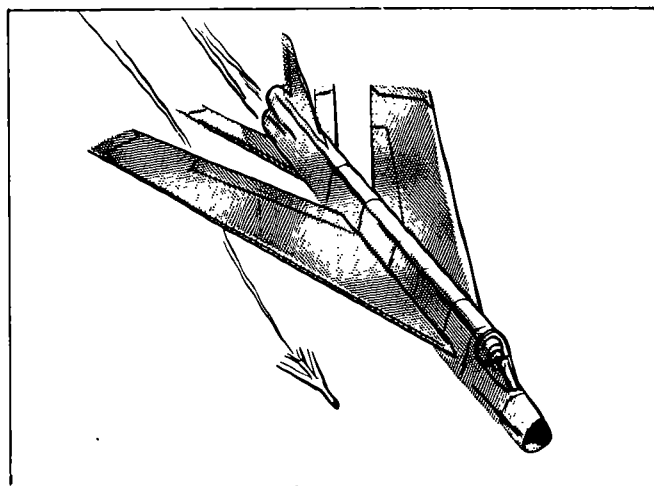
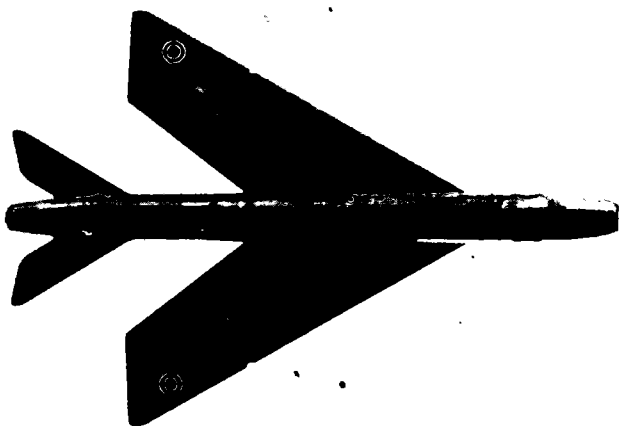
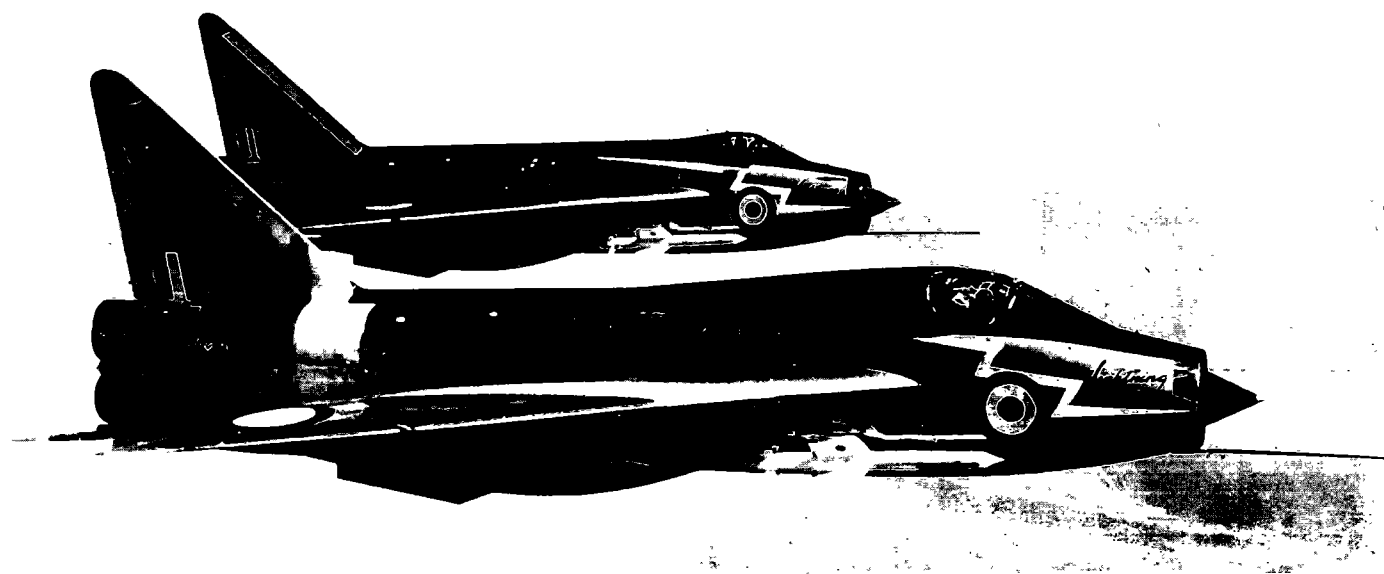
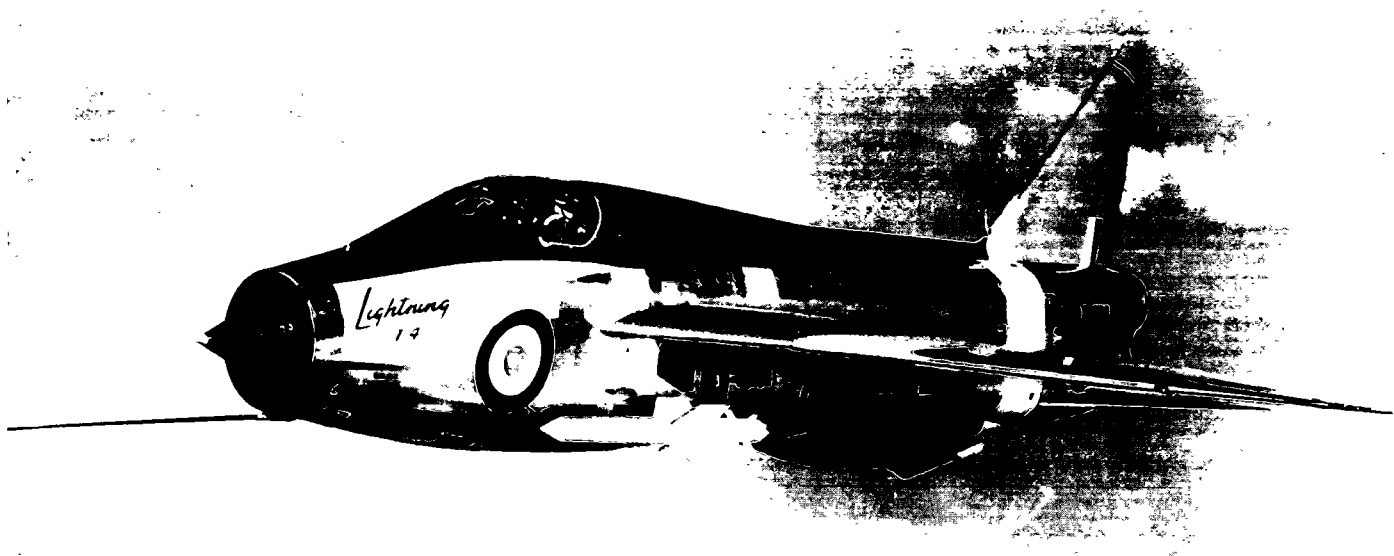


The Lightning, a twin-jet all-weather day and night fighter, entered service with the RAF in 1960. Fully supersonic, it has reached and maintained Mach 2 in level flight. Recognition features include: sharply sweptback, almost delta, wings mounted aft of the cockpit, slightly above the fuselage midpoint; a triangular-shaped vertical stabilizer; sharply sweptback horizontal tail surfaces; circular nose intake; thick-set fuselage; and tail pipes of the superimposed engines extending wellaft of the tail surfaces. Standard armament consists of two 30-mm guns flanking the cockpit, plus interchangeable packs installed beneath the forward fuselage for carrying rockets, additional guns, or two Firestreak missiles on lateral pylons. For endurance and range extension, a ventral tank is installed beneath the rear fuselage and a refueling probe on the port wing. The T. 4 trainer version generally resembles the F. 1 operational fighter, except for its forward fuselage, which has been made wider to accommodate two side-by-side seats. The trainer may also be used as an operational aircraft and carries the missile pack, but it does not have the fixed guns flanking the cockpit.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	ENGLISH ELECTRIC	Max. Range (Naut. Miles)		No. of Engines	2
Wing Span	34'10"	Crew No.	1	Model No.	Avon 200
Length	50'	Max. Speed (Knots)	Mach 2.1	Mfr.	ROLLS ROYCE
Cambat Weight (Lbs.)		Service Ceiling (Ft.)	60,000 approx.	Type	Turbojet
				Rating Each	11,250 #

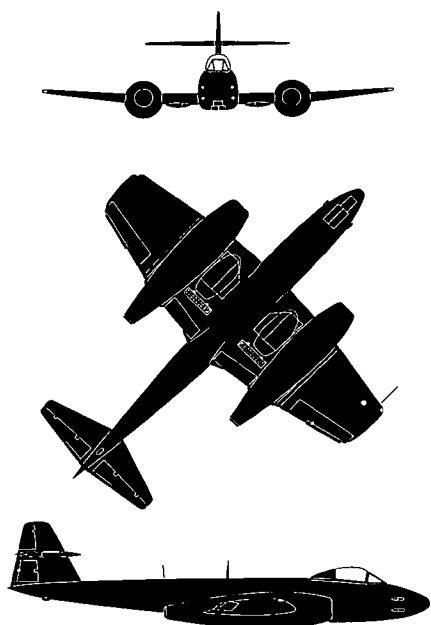
LIGHTNING

ENGLISH ELECTRIC





MK. 8



The Meteor F. Mk. 8, a twin-turbojet, single-seat fighter, is a progressive development of the Mk. 4. Outwardly, the most striking difference lies in the redesigned fin, rudder (now squared), and stabilizer. In addition, the Mk. 8 has a longer nose than the two previous versions and a pressurized cockpit covered by a single-piece, jettisonable hood. The Mk. 1 is operational with the British, as well as with the Belgian, Dutch, Danish, and Australian air forces. The Meteor N. F. Mk. 11 is a two-seat night fighter version. It employs an Mk. 7-type two-seat cockpit and canopy, a modified Mk. 3-type long-span outer wing, and a Mk. 8-type tail unit. Extensive modifications have been made to include the radar equipment in the extended nose, resulting in the four-cannon armament being displaced to the outer wings. Three droppable fuel tanks, one under the fuselage and two under the wings, may be carried.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	GLOSTER	Max. Range (Naut. Miles)	750 plus	No. of Engines	2
Wing Span	37'	Crew No.	1 or 2	Model No.	Derwent Mk-8
Length	45'	Max. Speed (Knots)	500 approx.	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)	15,000 plus	Service Ceiling (Ft.)	44,000 approx.	Type	Turbojet
				Rating Each	3,500#

METEOR

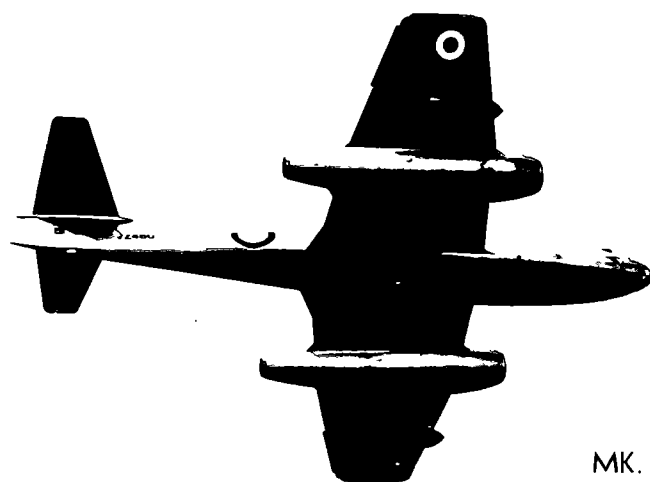
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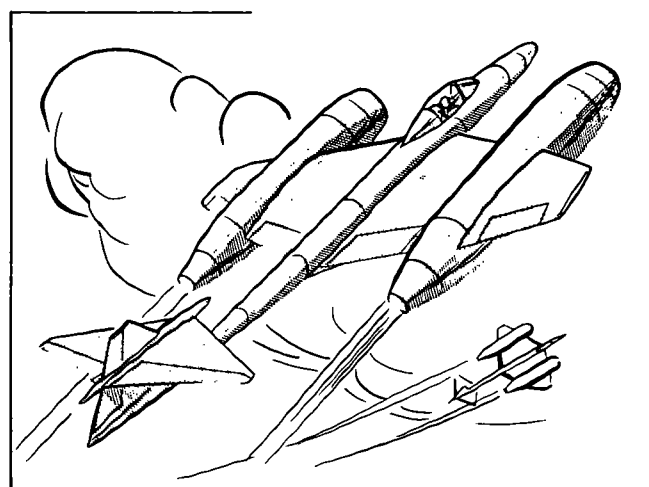
MK. 11

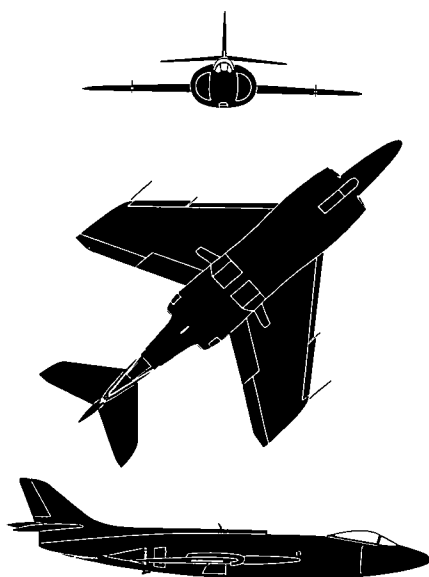
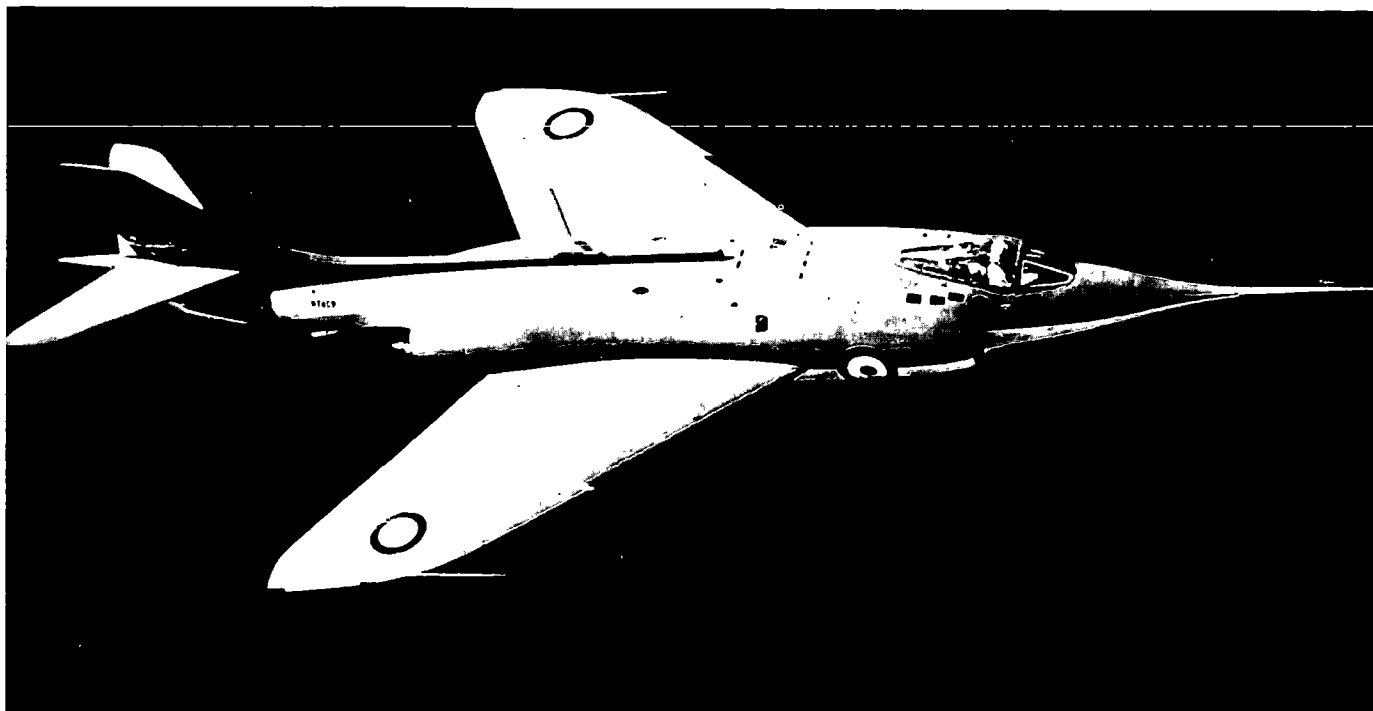


MK. 11



MK. 8



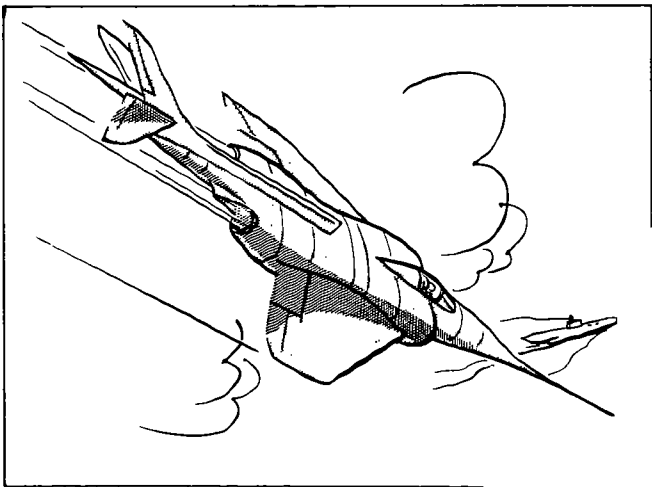
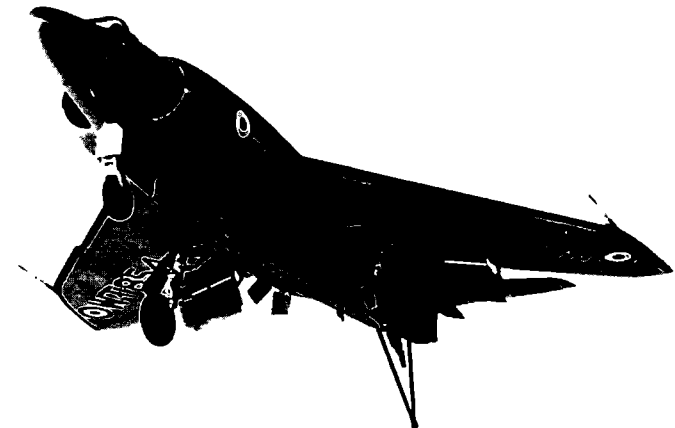
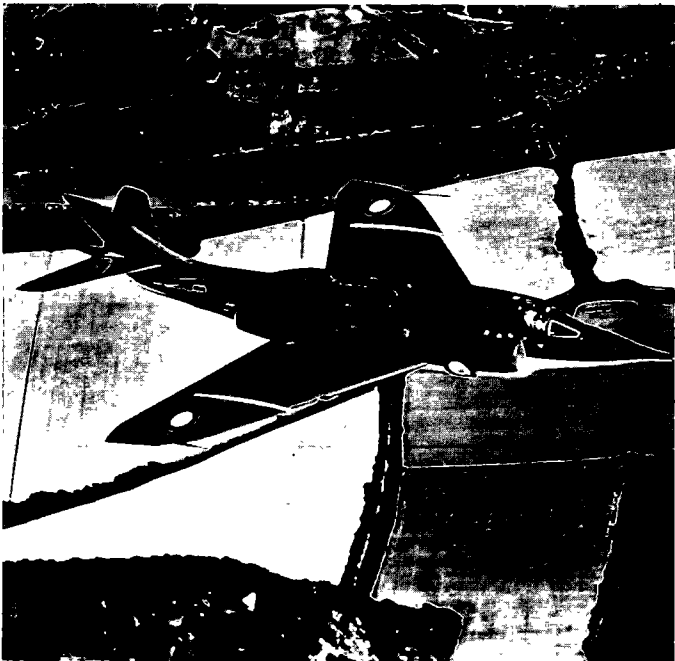
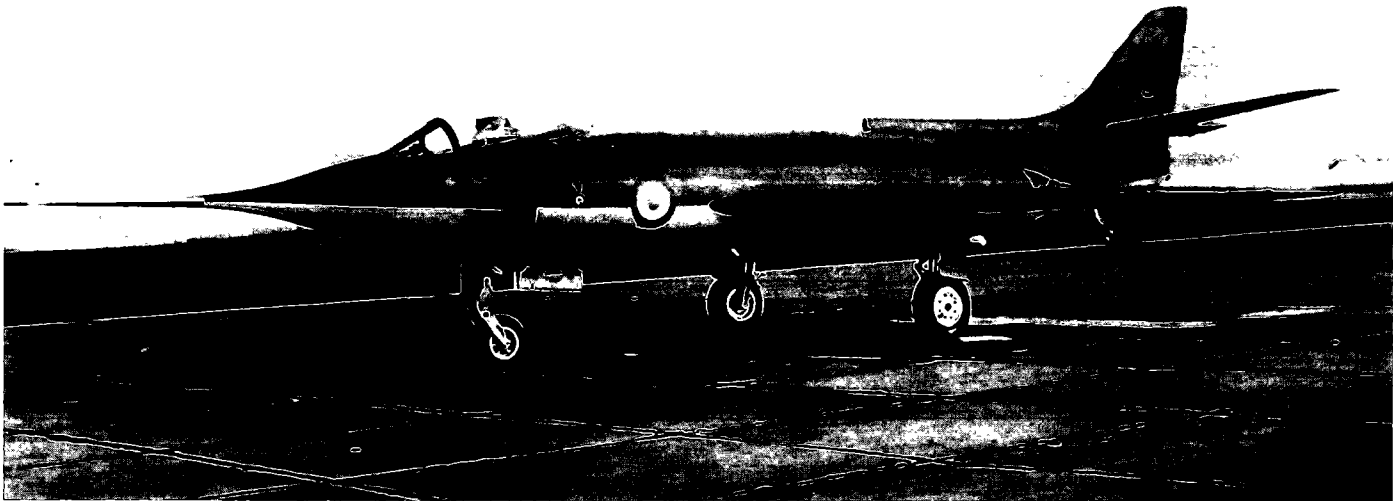


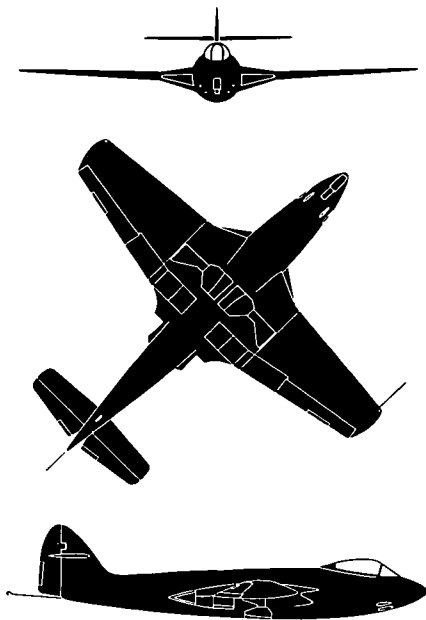
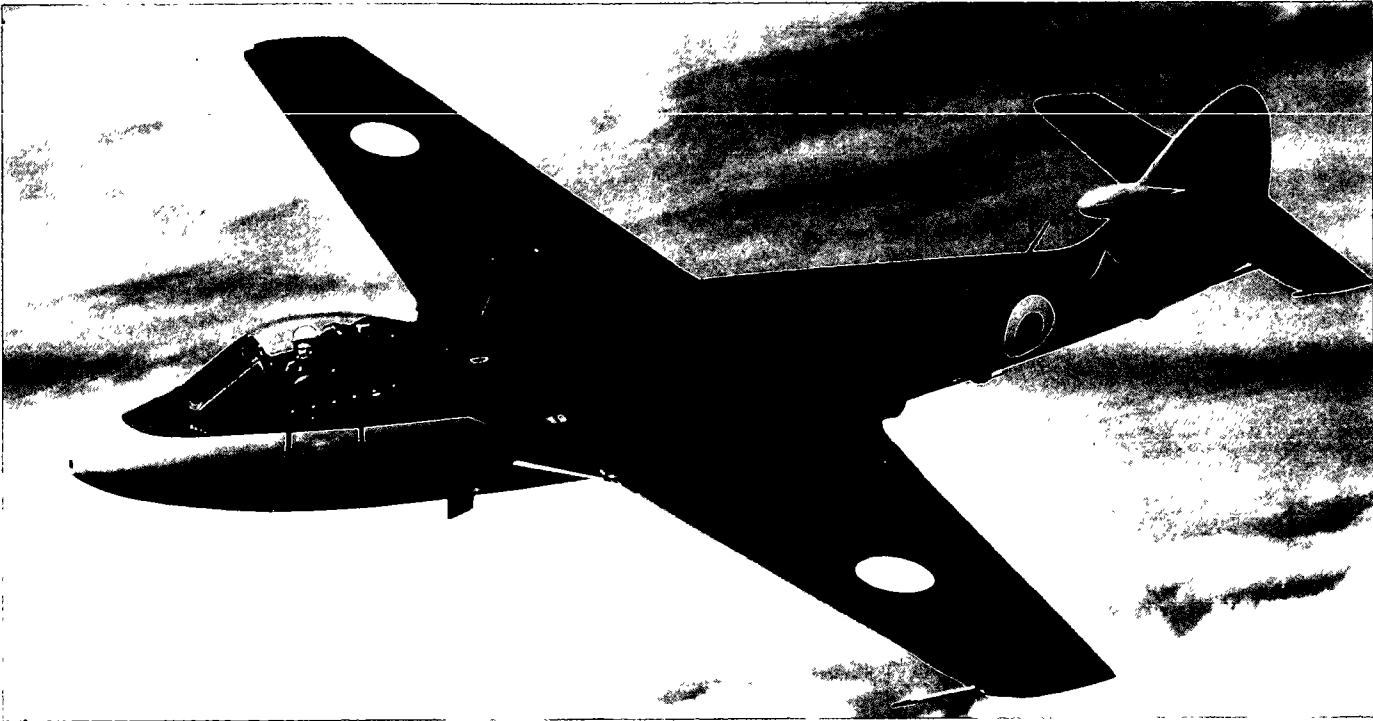
The Scimitar is a large twin-engined sweptwing fighter designed for operation from aircraft carriers. The two turbojet engines are mounted side by side amidships giving the center portion of the fuselage a wide, flat appearance in plan view. The jet air intakes and exhausts are located on the sides of the fuselage fore and aft of the wings, and an all-flying tail is fitted. A "blown-flap" system, in which air from the engines is blown over the flaps to increase lift, is employed in the Scimitar. This results in a reduction in approach speed for carrier landings. The Scimitar is armed with four 30-mm Aden cannons and is capable of carrying nuclear weapons.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr	VICKERS	Mox. Range (Naut. Miles)		No. of Engines	2
Wing Span	37'2"	Crew No	1	Model No.	Avon 200
Length	55'4"	Mox. Speed (Knots)	600 plus	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)		Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	11,250 #

SCIMITAR

VICKERS

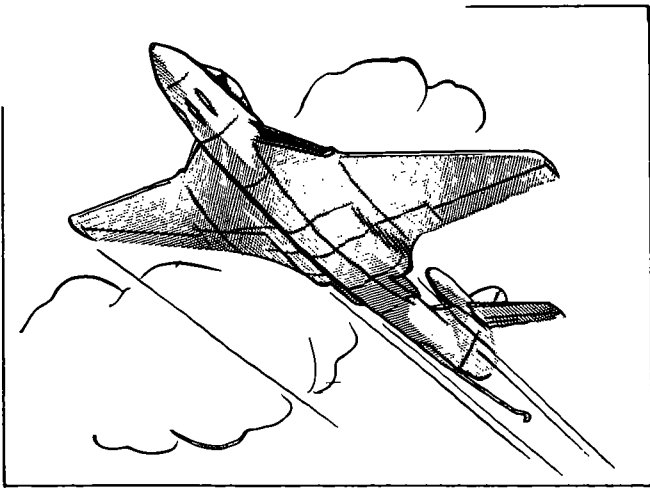
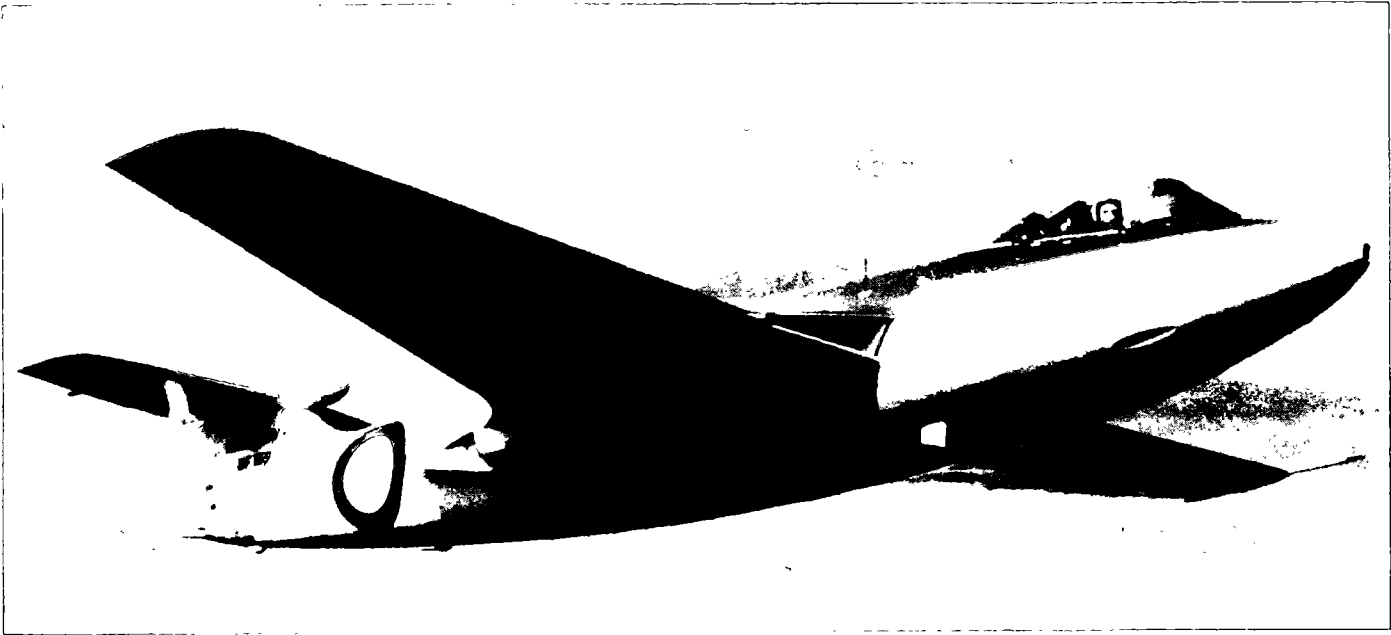




The Sea Hawk is a jet-propelled, single-seat fighter developed primarily for carrier-borne operations. A first flight was made in the fall of 1948 by the second prototype, which was a naval version with folding wings. The Sea Hawk is an exceptionally clean mid-wing monoplane with a tricycle landing gear, a single fin and rudder, and a high mounted stabilizer. The cockpit is located well forward in the nose and has a three-piece windscreen. Air intakes for the single jet engine, installed amidships, are in the wing's leading edge roots, and the jet exhaust exits on the wing's trailing edge on each side of the fuselage. The Sea Hawk was the first design to use such a twin-jet exhaust system with a single engine. This method provides more room for fuel tanks, thus increasing range. Armament consists of four 20-mm cannons and provisions for bombs or rockets in wing racks.

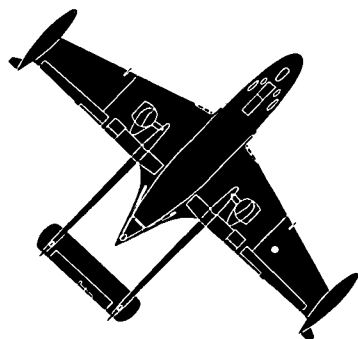
DATA APPLY TO SEA HAWK FGA.6

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	ARMSTRONG-WHITWORTH	Max. Range (Naut Miles)		Na. of Engines	1
Wing Span	39'	Crew Na.	1	Model Na.	Nene 103
Length	39'8"	Max. Speed (Knots)	521	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)	16,200	Service Ceiling (Ft.)		Type	Turbojet
				Rating Each	5,400 #





SEA VENOM

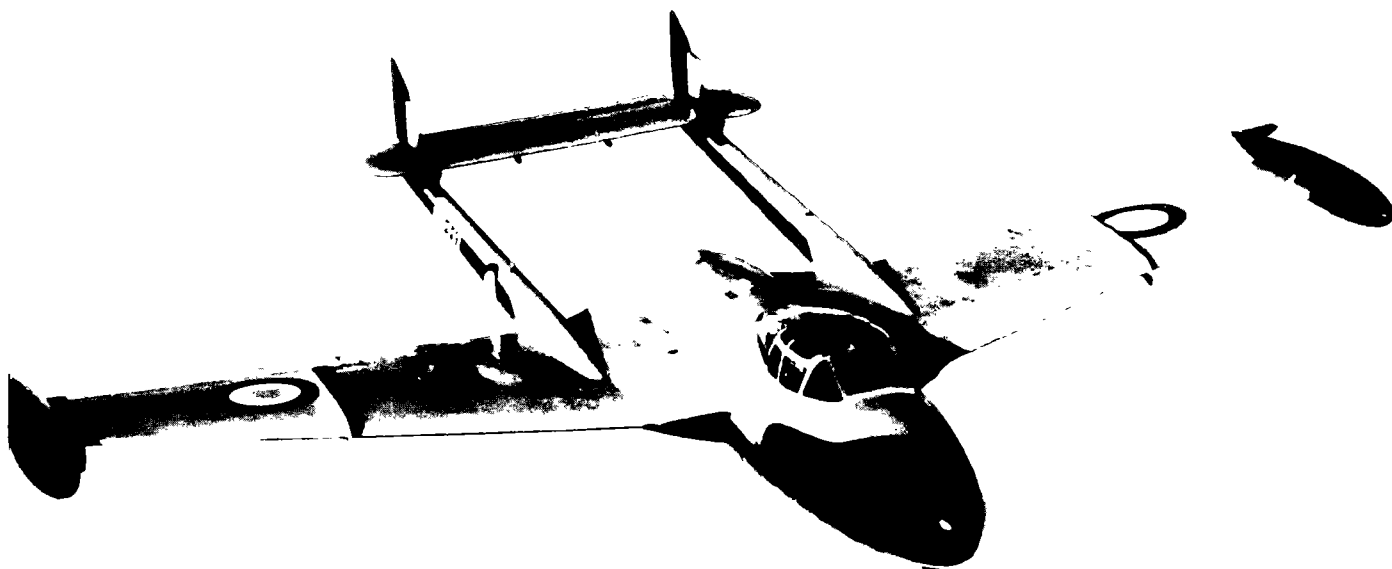


The Sea Venom is an all-weather jet fighter fully equipped for operation from carriers. It is a naval version of the R.A.F. Venom N. F. Mk. 2 and is similar in appearance to the Vampire. The Sea Venom has power-folding wings and catapult and deck arrester gear, differing in these respects from the Venom N. F. Mk. 2. A crew of two, pilot and radar operator, are seated side by side. The wing is a square-tipped unit of very thin section, and twin fins and rudders are mounted above the tail with a single elevator between. Jettisonable tanks, designed to be retained in combat, can be attached to the wing tips. Sea Venom armament consists of four 30-mm guns, plus provisions for bombs or rockets under the wings.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DE HAVILLAND	Max. Range (Naut. Miles)	800	No. of Engines	1
Wing Span	42'	Crew No.	2	Model No.	Ghost-48 Mk-1
Length	36'	Max. Speed (Knots)	525	Mfr.	DE HAVILLAND
Combat Weight (Lbs.)	11,150	Service Ceiling (Ft.)	50,000	Type	Turbojet
				Rating Each	5,200#

SEA VENOM

DeHAVILLAND



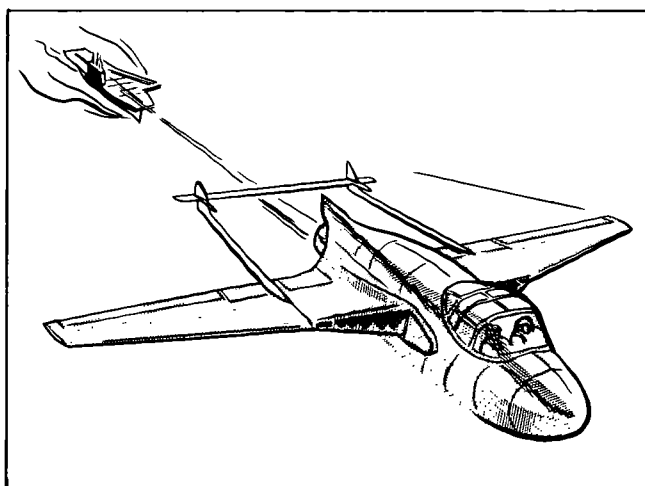
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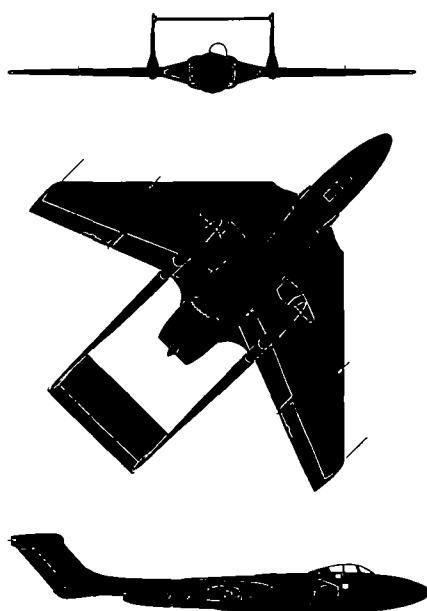


VENOM



VENOM



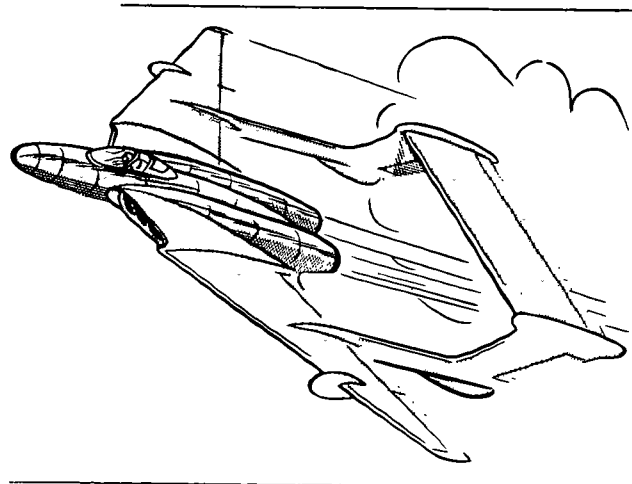
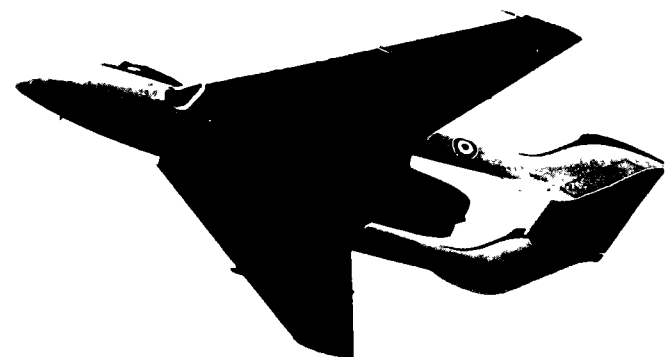
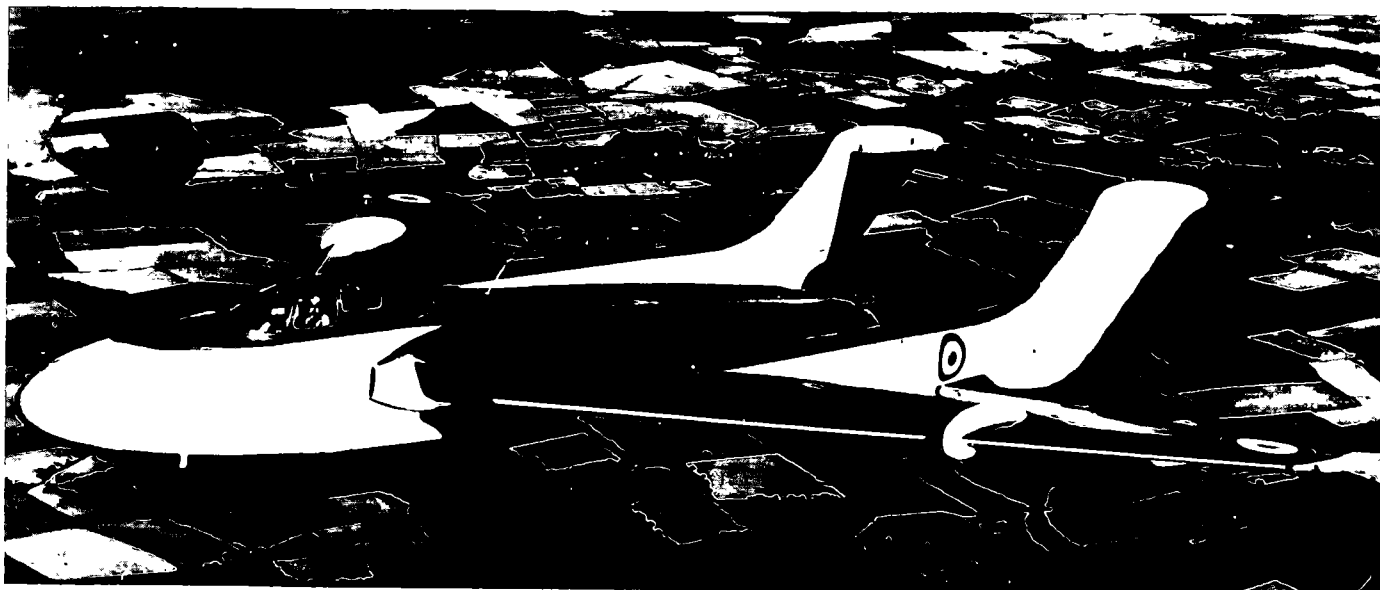


The Sea Vixen, a two-seat all-weather jet fighter, entered service with the Royal Navy in July 1959 as an eventual replacement for the Sea Venom. It is supersonic in a shallow dive. Prominent recognition features include its high twin-boom tail with top-mounted rectangular horizontal stabilizer and, in the production version, its large pointed nose radome. The sharply swept, tapered wings are mounted amidships, with the engines buried in the wings close to the fuselage. The pilot sits to port under the offset raised canopy with the radar operator lower and to starboard. To accommodate the amount of electronic and navigational gear plus ordnance that it carries, the aircraft has been made relatively large for a carrier-based fighter. The Sea Vixen is the first British service fighter without fixed gun armament and, instead, is fitted with two retractable rocket packs on the underside of the fuselage. These may be supplemented with up to four Firestreak infrared air-to-air missiles or four additional rocket packs, carried on underwing pylons. Although it is primarily an all-weather fighter, the Sea Vixen may also be used as a strike aircraft and in this role can carry various combinations of bombs and rockets plus auxiliary fuel tanks for added range. A flight refuelling probe mounted in the port wing is standard equipment.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	De HAVILLAND	Max. Range (Naut. Miles)	910 approx.	No. of Engines	2
Wing Span	50'	Crew No.	2	Model No.	Avon 208
Length	53'6½"	Max. Speed (Knots)	625	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)	35,000 approx.	Service Ceiling (Ft.)	50,000 approx.	Type	Turbojet
				Rating Each	10,000 #

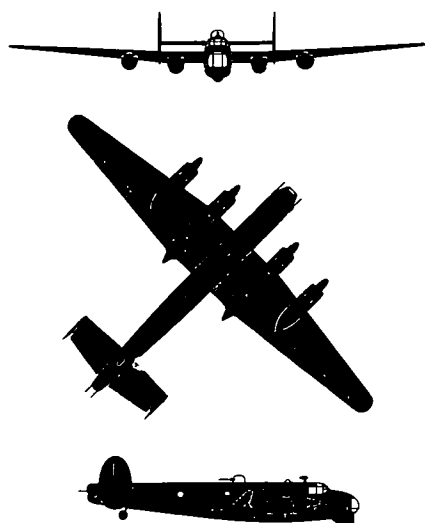
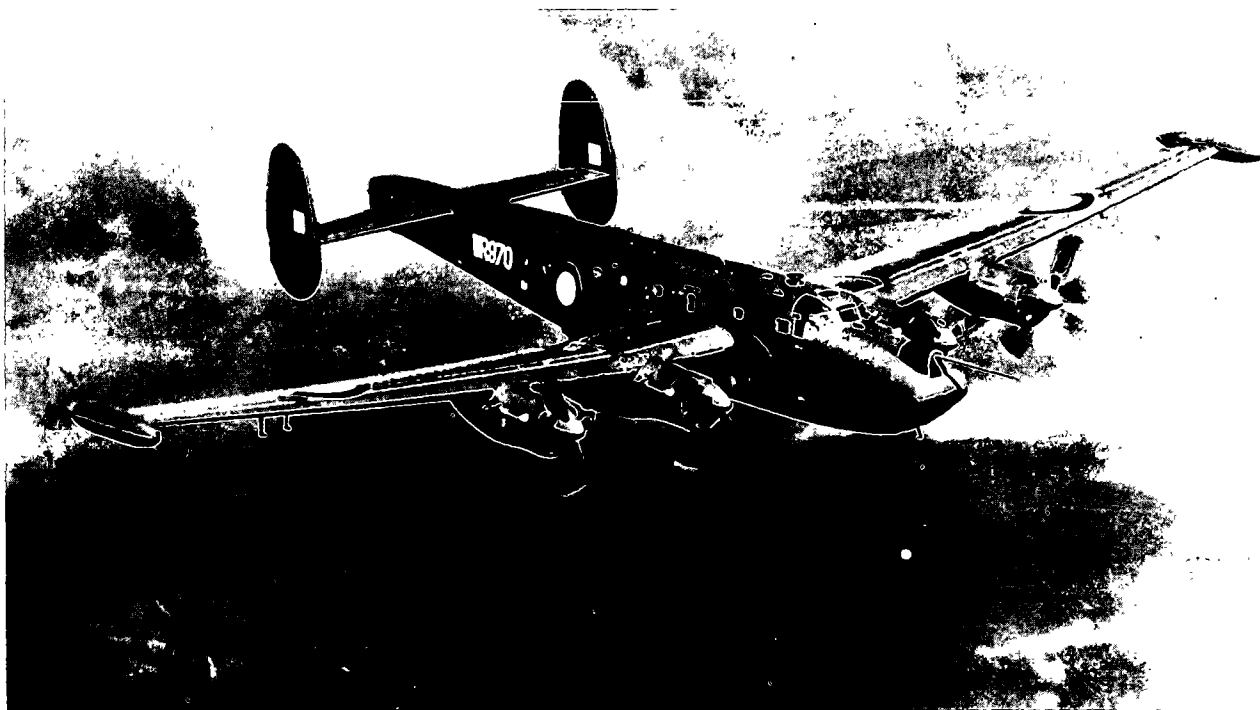
SEA VIXEN

De HAVILLAND



AVRO

SHACKLETON

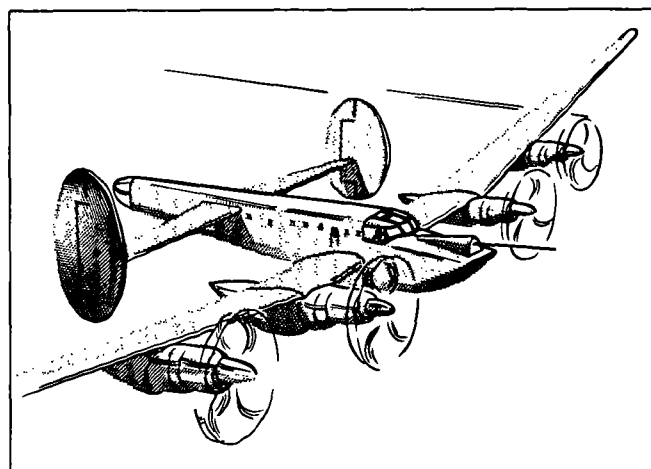
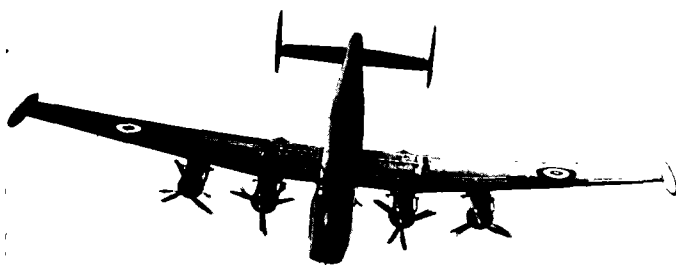
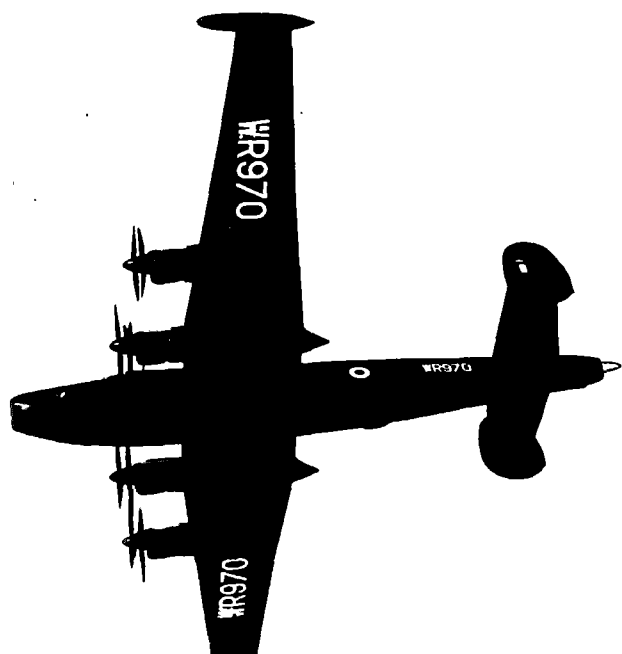


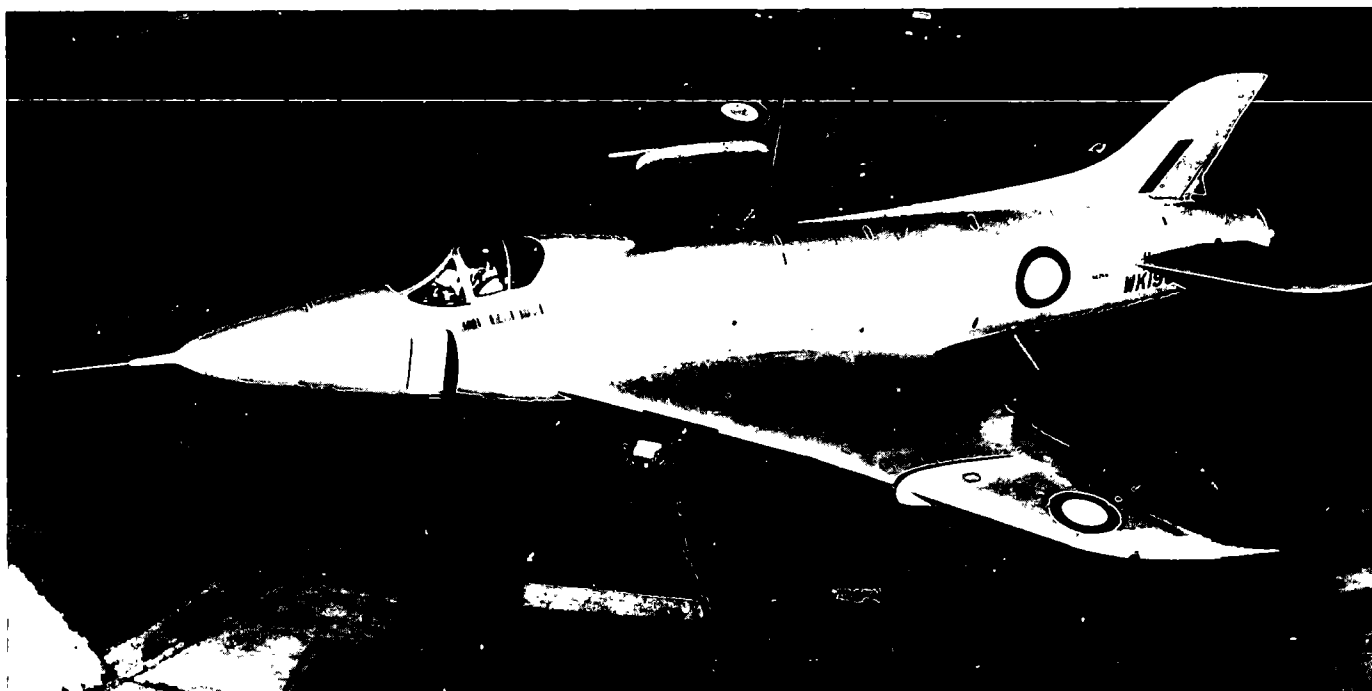
The Shackleton, a medium bomber developed from the Lancaster and Lincoln bombers, is used by the RAF Coastal Command on reconnaissance duties and for shadowing and striking at surface and underwater vessels. It is one of the most powerful reciprocating engined aircraft in the RAF. The four engines, coupled to four six-bladed contrarotating propellers, provide 10,000 h.p. for takeoff. A tailwheel landing gear is used to facilitate easier stowage of bombs, and a transparent cone at the rear of the fuselage provides a lookout position. The Mks. 1 and 1A have a chin-type radome, which forms a good recognition detail. All other versions, however, have a retractable radome located under the fuselage aft of the bomb bay. The Shackleton MR. Mk.3 resembles the earlier two versions but lacks a mid-upper turret. The Shackleton has a bulkier fuselage than the Lincoln and a wider stabilizer. Fins and rudders are also larger and rounder. Armament consists of various combinations of bombs, mines, and depth charges.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	AVRO	Max. Range (Naut. Miles)	3,660	No. of Engines	4
Wing Span	120'	Crew No.	10	Model No.	Griffon 570
Length	92'	Max. Speed (Knots)	262	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)	100,000 approx.	Service Ceiling (Ft.)	19,200	Type	Piston
				Rating Each	2420 hp.

SHACKLETON

AVRO



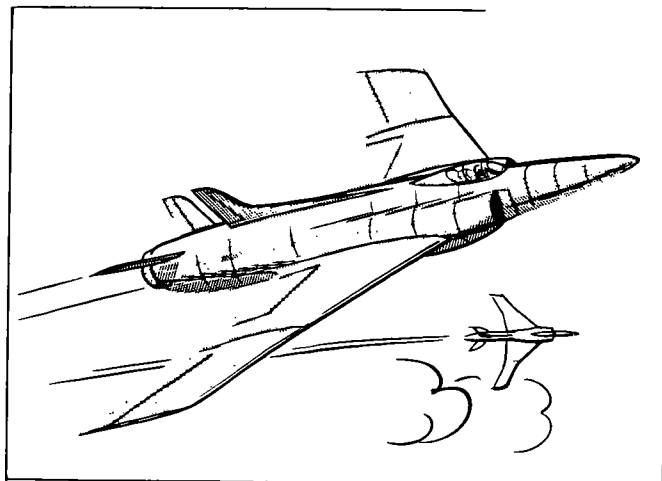
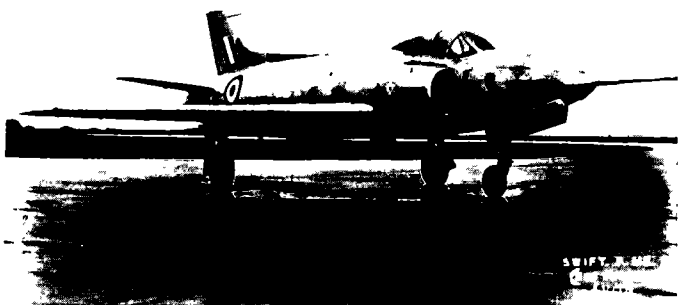
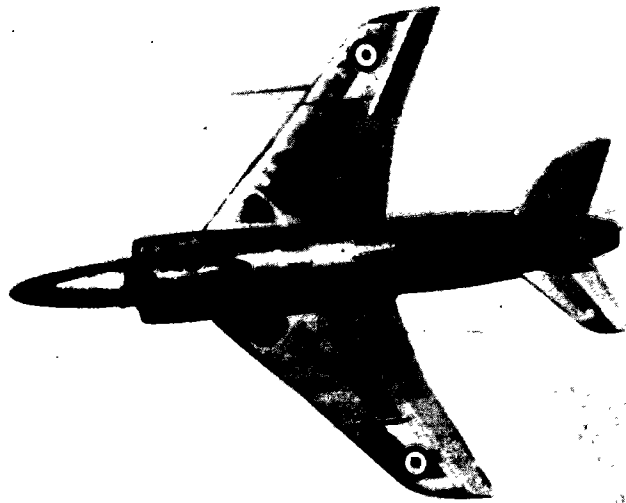
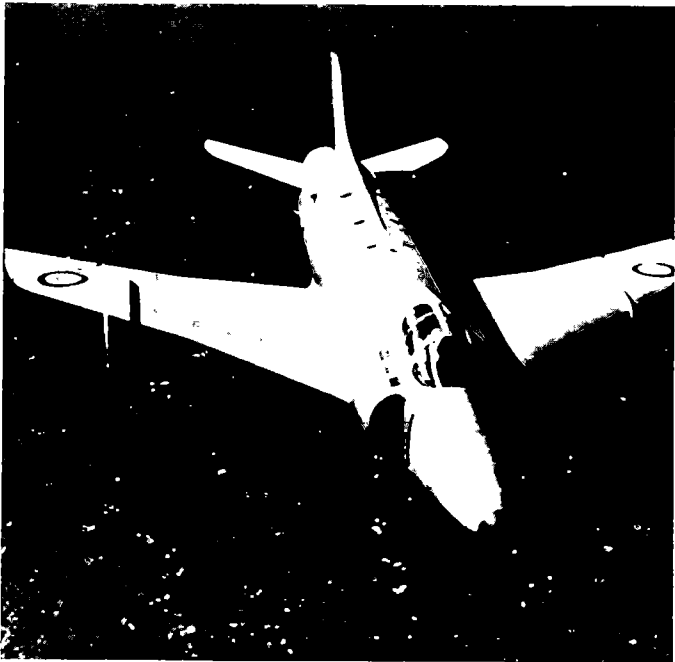
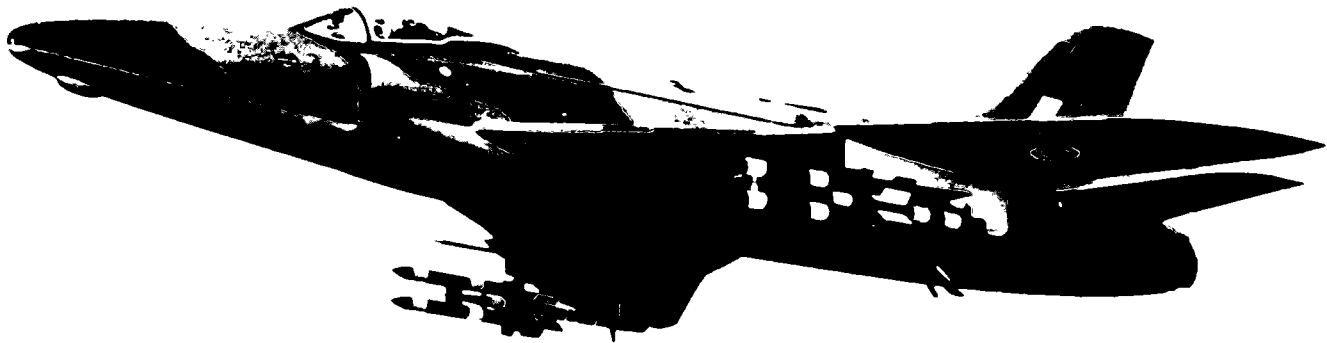


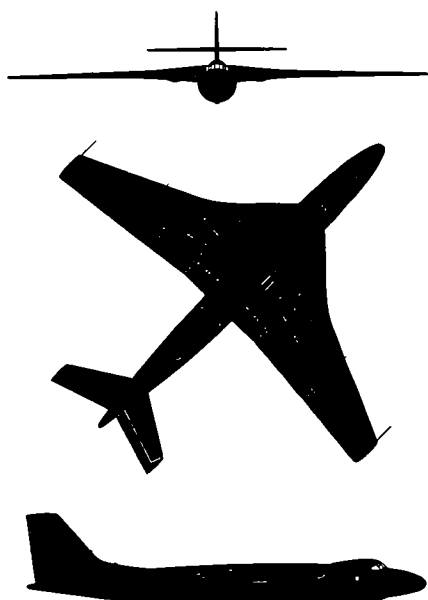
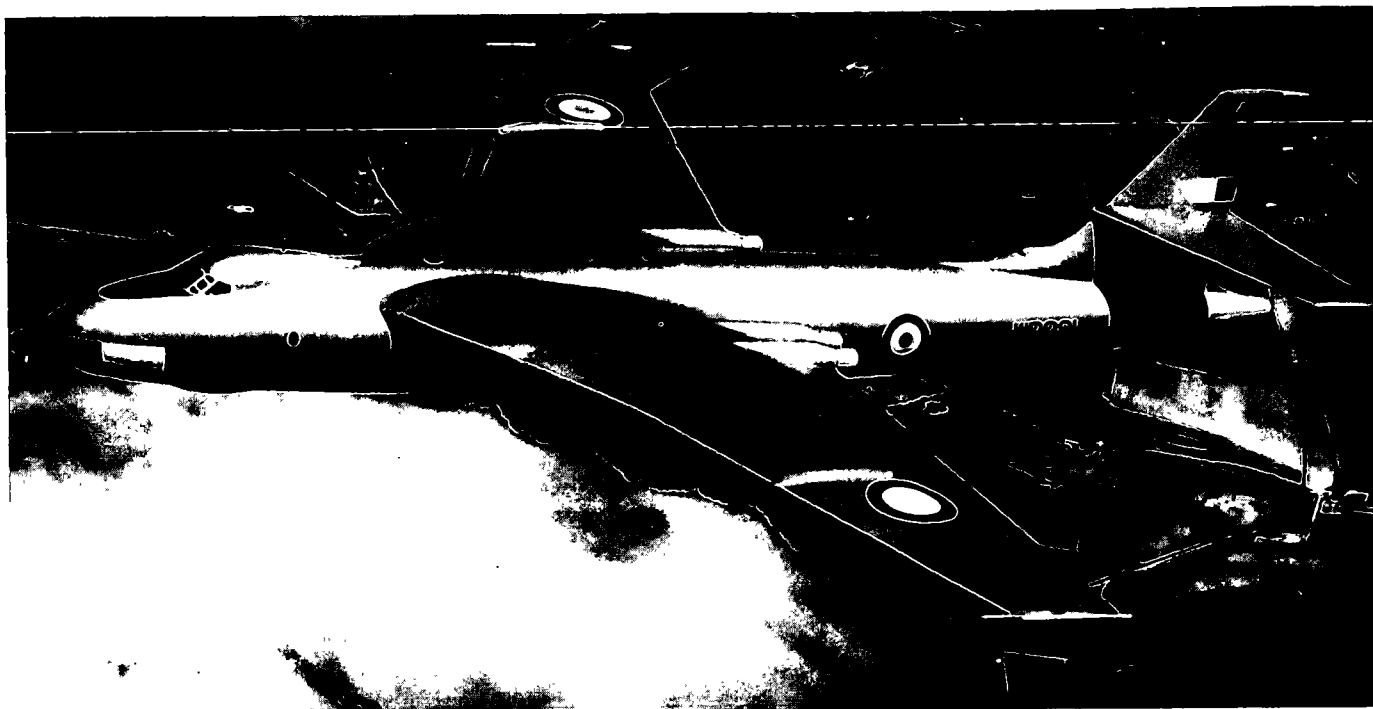
The Swift is a single-seat jet fighter which was developed from a series of Supermarine prototypes. This sweptwing jet (37° sweep) and its stablemate, the Hawker Hunter, were both designed to the same Ministry of Supply specification. These two similar types perpetuate the standard set prior to World War II when their ancestors, the Spitfire and Hurricane, appeared. The Swift differs from the midwing Hunter in that it has a low-mounted sweptwing. Another difference is the Swift's cheek scoops and bifurcated air duct for its single jet engine, while the Hunter features wing root intakes. In the Swift, the earlier Navy Attacker's fuselage has been retained almost unchanged. In September of 1953 a Swift set a world speed record of 735.7 m.p.h. This record, however, was short lived. The Swift is used almost entirely as a low-altitude fighter-reconnaissance aircraft. Its armament consists of two 30-mm Aden guns.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	SUPERMARINE	Max. Range (Naut.Miles)	650 approx.	No. of Engines	1
Wing Span	32'4"	Crew No.	1	Model No.	Avon RA-7R
Length	41'5"	Max. Speed (Knots)	642	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)	21,000 approx.	Service Ceiling (Ft.)	45,000 approx.	Type	Turbojet
				Rating Each	10,000# plus A.B.

SWIFT

SUPERMARINE



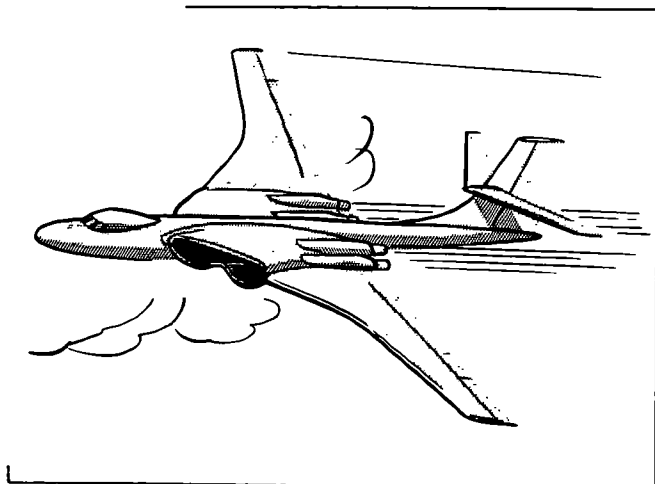
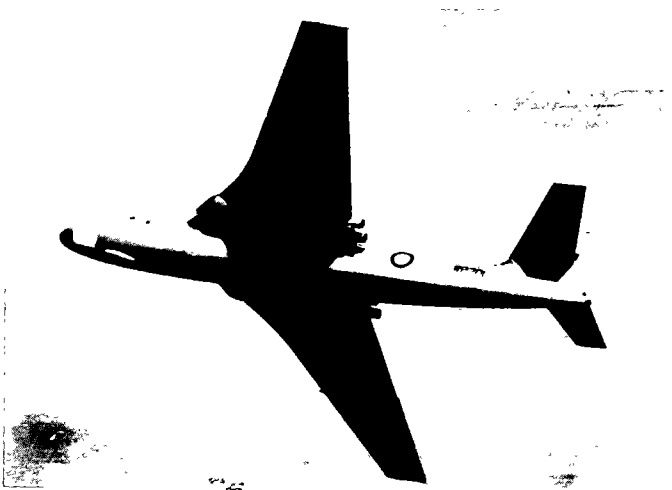
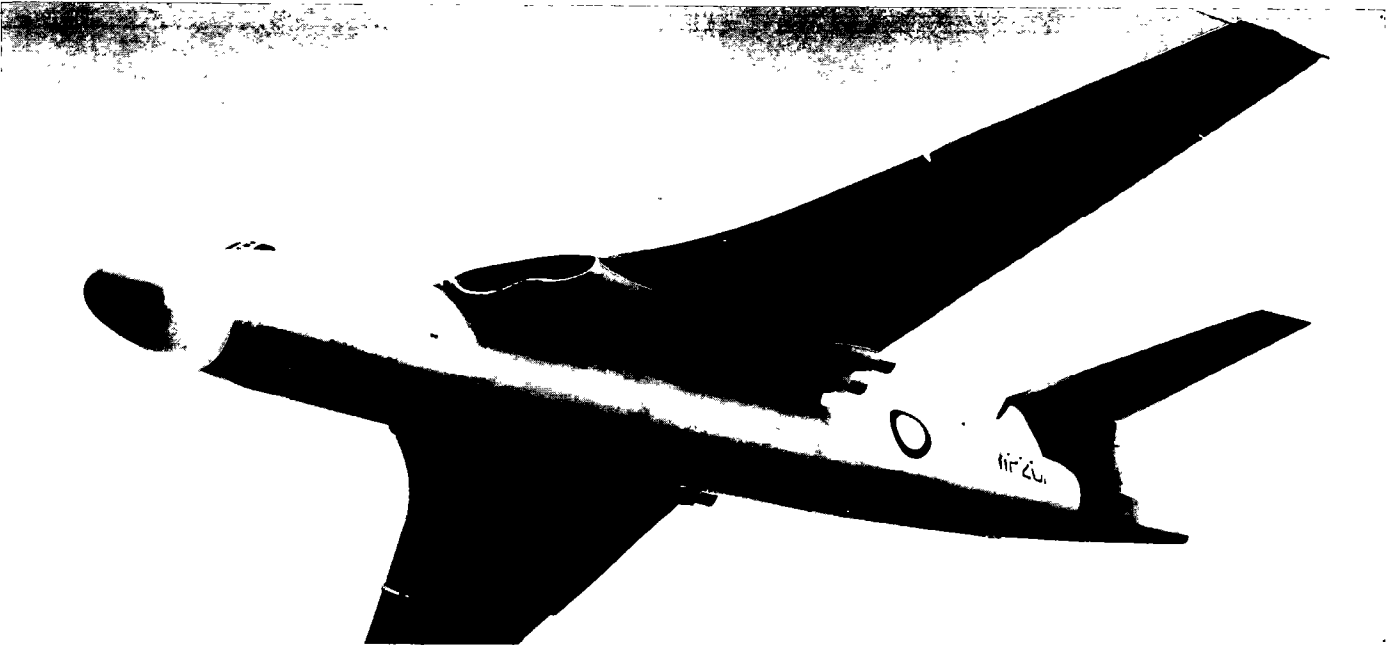


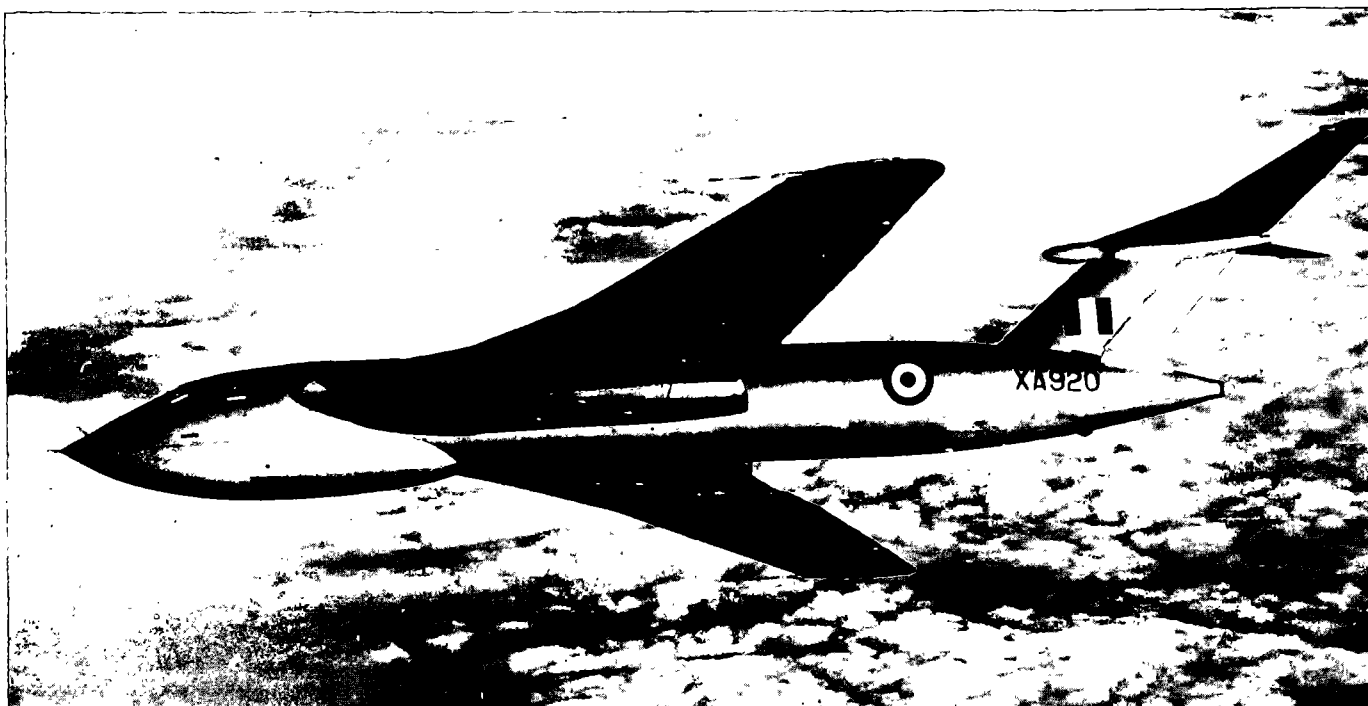
The Valiant is a four-jet sweptwing medium bomber, a prototype of which flew for the first time in May 1951. The jet engines are buried neatly in the crescent wings near the fuselage, and the long nose protrudes forward with the cockpit rising over the nose section. As a result of air intake trouble with a prototype Valiant, the production bomber version features larger air intake jet openings. The vertical stabilizer is angular with a midmounted horizontal stabilizer. The leading edge of the shoulder-mounted wing has a compound sweepback, with the center section having the greater angle. The trailing edge is straight at the roots with a slight sweepback in the outer panels. A smaller boundary-layer fence is located outboard on each wing. Wings, horizontal stabilizer, and vertical stabilizer have blunt tips. The Valiant's four jets can be supplemented for takeoff by two rocket engines carried under the wings in jettisonable pods. In addition to the basic bomber, photo-reconnaissance and tanker versions were also produced.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	VICKERS	Max. Range (Naut. Miles)	3,000 approx.	No. of Engines	4
Wing Span	114'4"	Crew No.	6-7	Model No.	Avon 204
Length	108'3"	Max. Speed (Knots)	520 approx.	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)	150,000 approx.	Service Ceiling (Ft.)	54,000	Type	Turbojet
				Rating Each	9,500 #

VALIANT

VICKERS

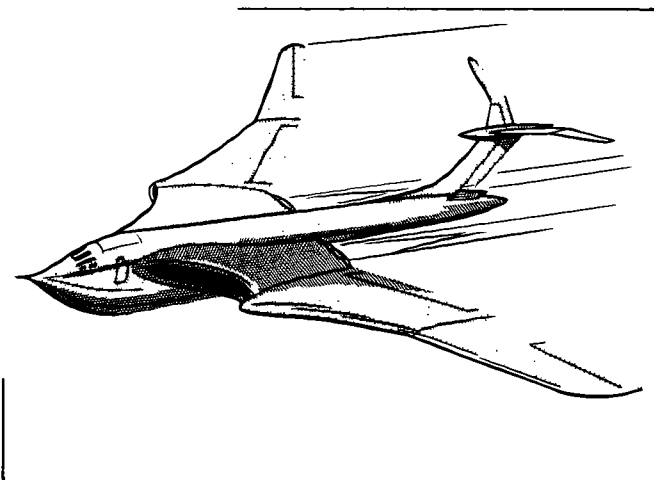
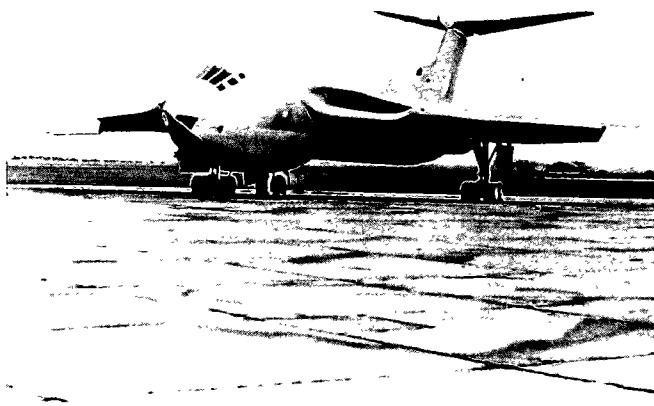
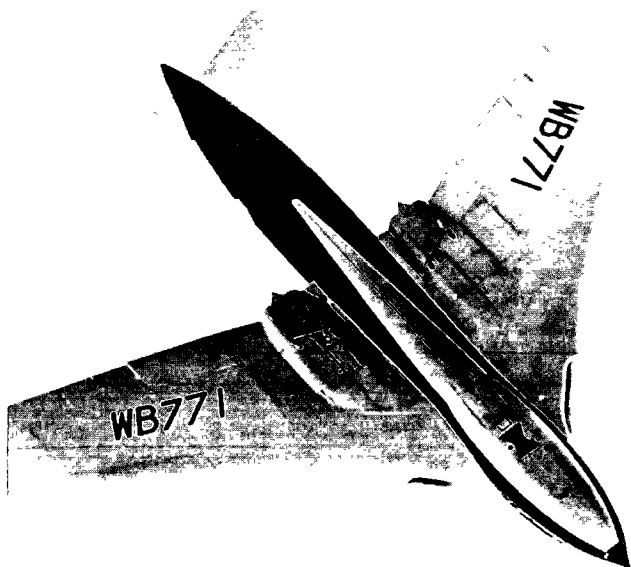
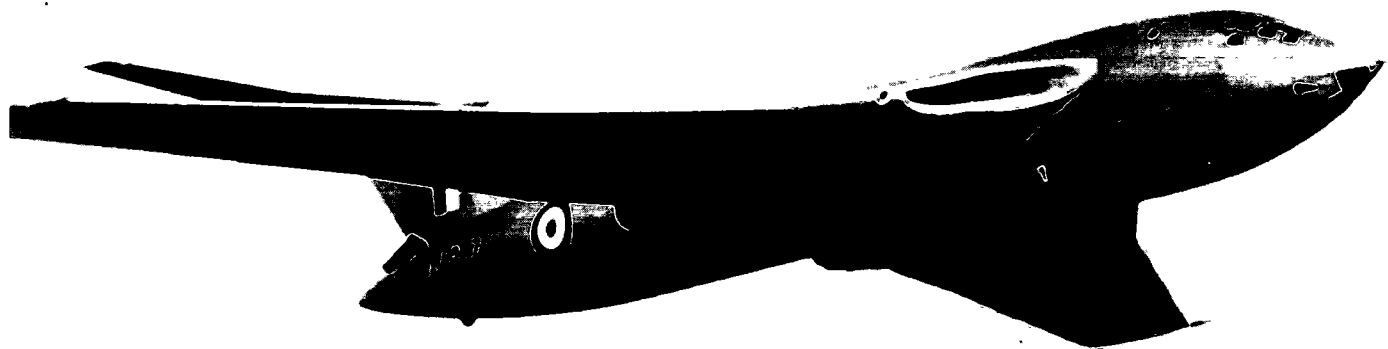




The Victor is a four-jet bomber with a swept-back T-tail and a so-called "crescent" wing in which the angle of sweepback is greater at the root and progressively less toward the tip. Advantages claimed for this type of wing include the retention of the necessary wing thickness for the required structural strength and adequate internal stowage space. It also provides for the delay in the compressibility drag rise obtained with a highly swept-back wing for a high Mach number. In addition, the Victor has high-lift devices incorporated in both the leading edges and trailing edges of the wings. A bulbous chin encloses long-range bombing aids and the nosewheel. The unusual horizontal stabilizer has a compound sweep on its leading edge. It is mounted on the tip of the vertical stabilizer. The Victor B.2 differs from the B.1 in having a longer wingspan (120 feet), more powerful engines (Conway RCo.11 with 17,250-pound thrust each), larger air intakes, and two small retractable air scoops at the base of the vertical stabilizer. In-flight refueling probes and auxiliary wing tanks, seen on some Victors B.1, are standard equipment on the production Victor B.2.

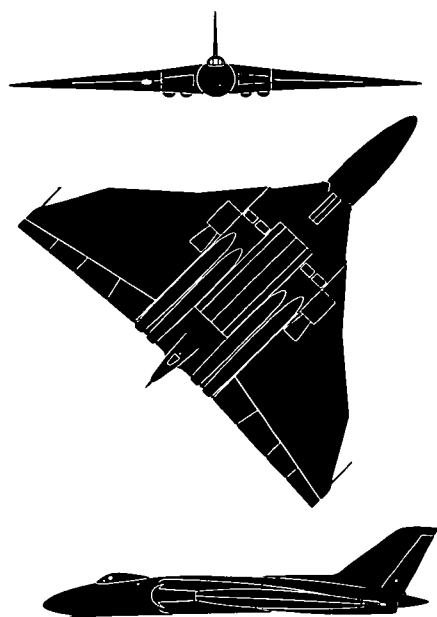
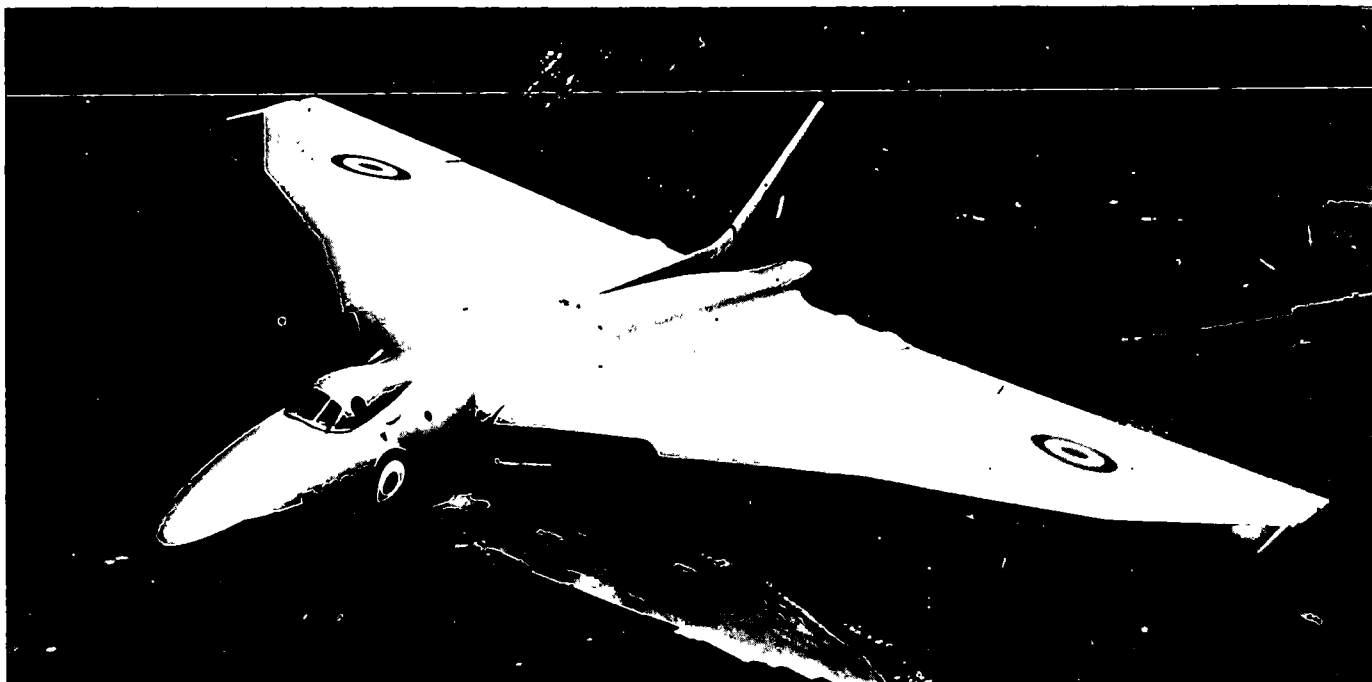
DATA APPLY TO THE VICTOR B.1

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	HANDLEY-PAGE	Max. Range (Naut. Miles)	3,000 approx.	No. of Engines	4
Wing Span	110'	Crew No.	5	Model No.	Sapphire 200
Length	115'	Max. Speed (Knots)	520 approx.	Mfr	ARMSTRONG SIDDELEY
Combat Weight (lbs.)	150,000 approx.	Service Ceiling (Ft.)	48,000 approx.	Type	Turbojet
				Rating Each	11,000 #



AVRO

VULCAN



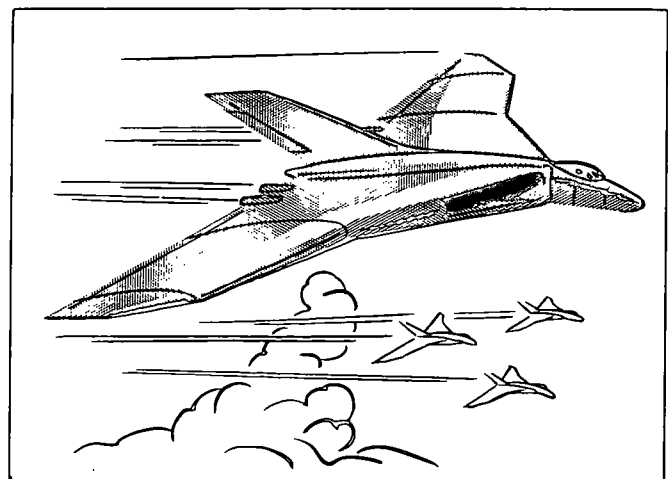
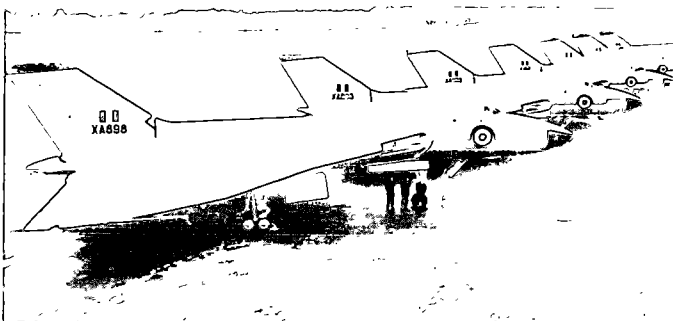
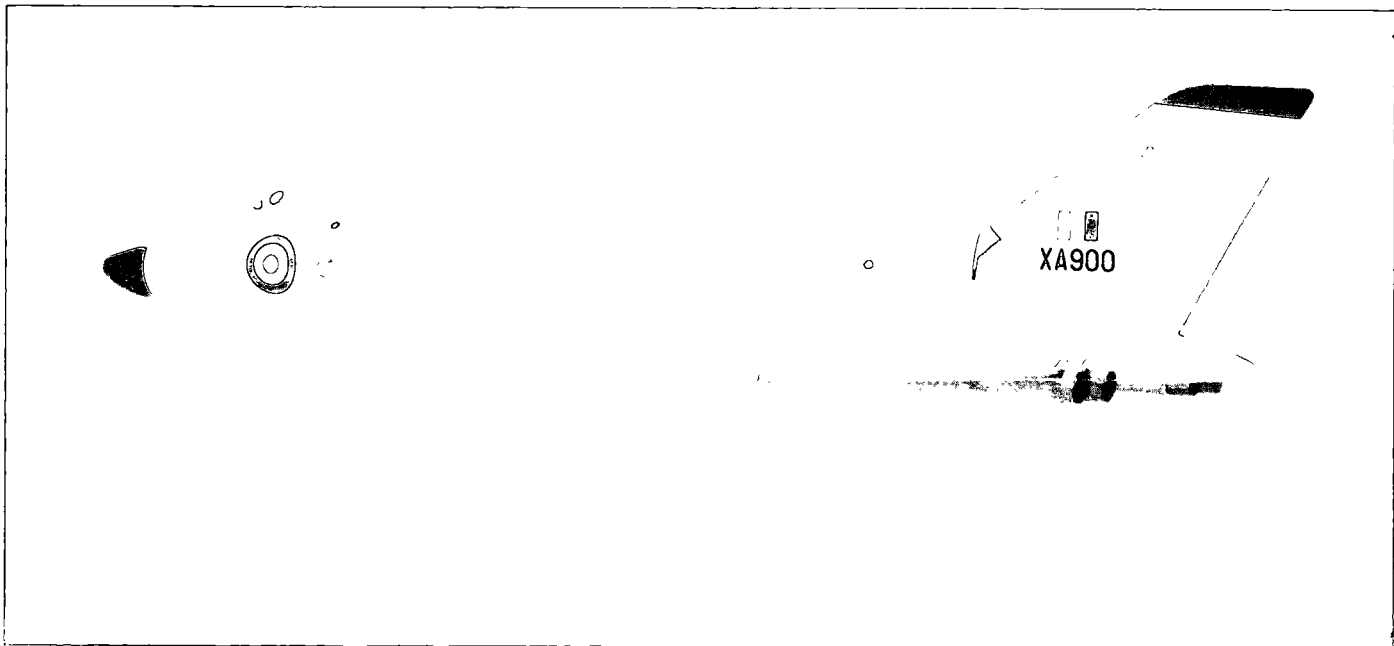
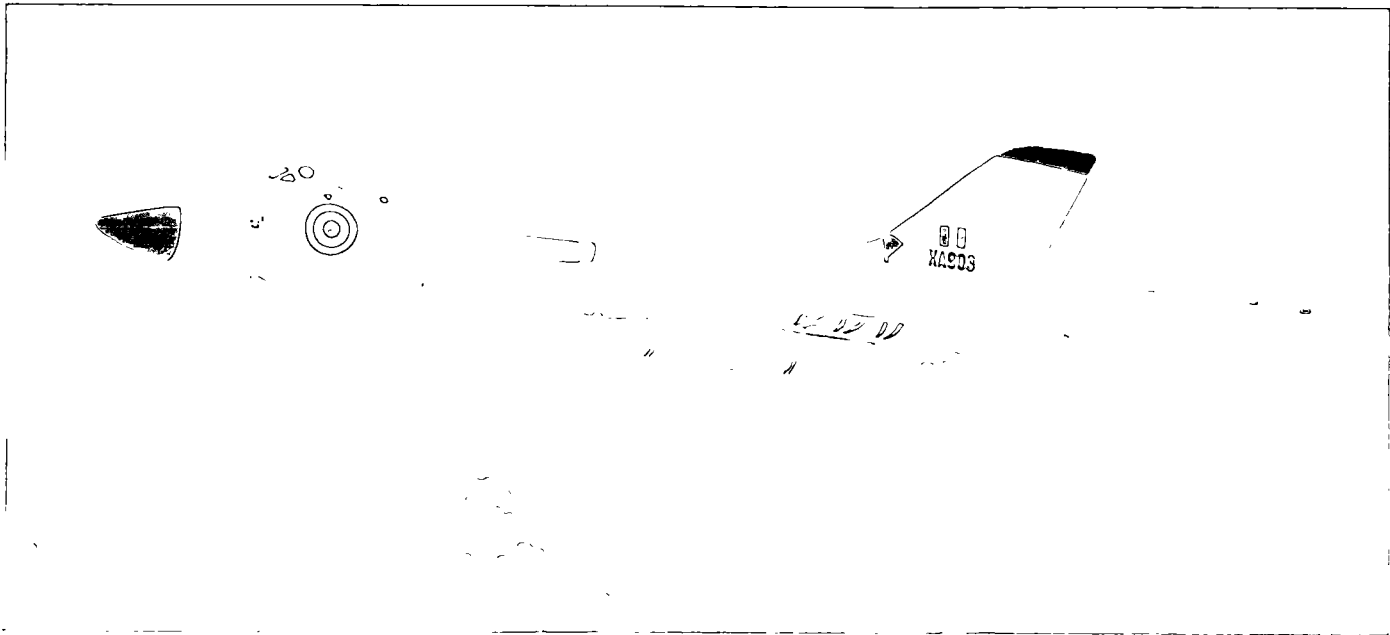
The Vulcan, the first jet bomber to use the delta-wing configuration, is powered by four jet engines buried near the wing roots. Prominent recognition features of this aircraft are the expanse and thickness of the large delta wing with its compound sweepback, the long bullet-shaped nose which protrudes well out in front of the wing, and the retractable dive brakes. The aircraft has a twin nose-wheel landing gear that retracts backward, while the main gear is located in the wing. Bomb bay doors are located between the vertical fairways of the engine tail pipes. The earlier B.1 version carries conventional or nuclear weapons internally. The Vulcan B.2 is a development of the B.1 with more powerful engines, a modified wing with increased span, and increased all-round performance; it also has a noticeably lengthened and bulging tail cone which houses electronic equipment. The B.2 will carry the Blue Steel stand-off bomb, and later developments will carry the Skybolt air-launched ballistic missile.

DATA APPLY TO VULCAN B.1

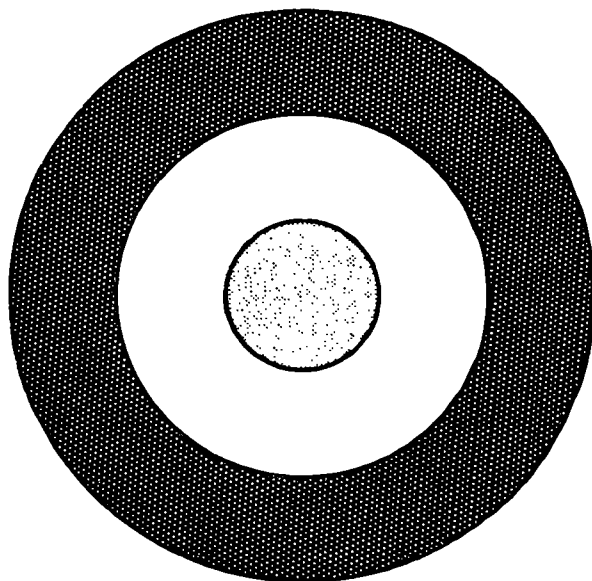
AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	AVRO	Mox. Range (Naut Miles)	3,000 approx.	No. of Engines	4
Wing Span	99'	Crew No.	5	Model No.	Olympus-104
Length	97'1"	Mox Speed (Knots)	520 approx.	Mfr.	BRISTOL
Combat Weight (Lbs.)	160,000 approx.	Service Ceiling (Ft.)	48,000 approx.	Type	Turbojet
				Rating Each	13,500 #

VULCAN

AVRO



OTHER
UNITED KINGDOM
AIRCRAFT

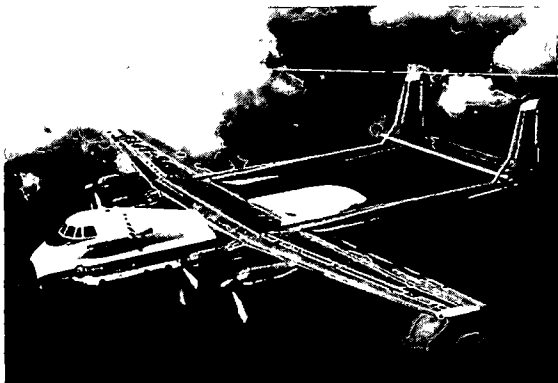




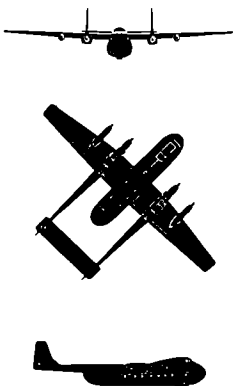
© JUREX

ARMSTRONG WHITWORTH

ARGOSY



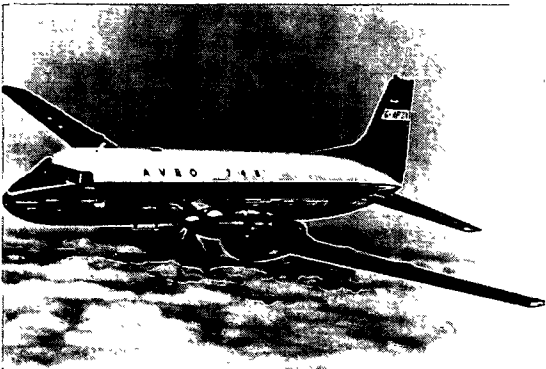
Mfr.	ARMSTRONG WHITWORTH	Max. Speed (Knots)	270 approx.
Wing Span	115'	Service Ceiling (Ft.)	25,000
Length	86'9"	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	88,000	Model No.	Dart 526
Max. Range (Naut. Miles)	2,300	Mfr.	ROLLS ROYCE
Crew No.	2-4	Rating Each	2,100 eshp.



The Argosy AW.650 freightercoach is a twin-boom, four-turboprop aircraft designed to meet requirements for a large-capacity freight and passenger transport. The deep, parallel fuselage has a rounded nose and stern, and features a high-set cockpit superstructure. The large, shoulder-mounted wing, with squared-off tips, is based on the wing of the Avro Shackleton. Engines are mounted underneath the wings with the two inboard nacelles merging into the twin booms; the latter are elliptical in section and taper almost to points at the tail, where the tall vertical control surfaces rise. Set at the vertical stabilizer roots, a rectangular elevator joins the booms, with short extensions outward. A military version, the AW.660, which made its first flight in July 1960, differs externally from the basic AW.650 configuration in its upswept, beaver-tail stern fuselage, the bottom half of which can be lowered and extended to the ground to form an integral loading ramp. The Argosy AW.660 will carry 69 troops or 31,300 pounds of bulky equipment, and will be able to use grass strips or unimproved runways.

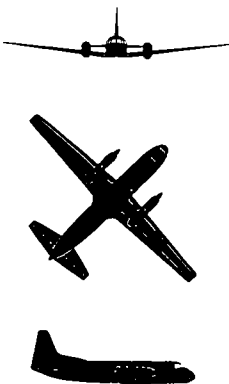
A.V. ROE

AVRO 748



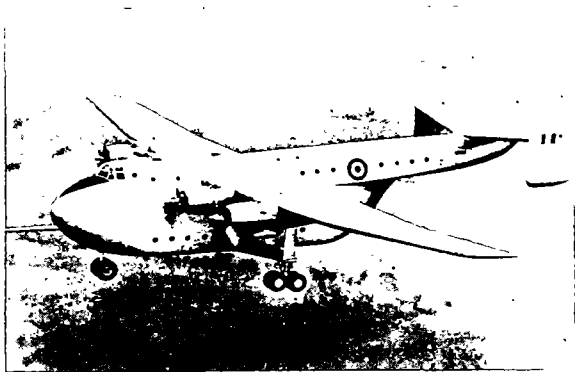
DATA APPLY TO AVRO 748 SRS 1

Mfr.	A. V. ROE	Max. Speed (Knots)	230 (Av. Cruise)
Wing Span	95'	Service Ceiling (Ft.)	29,000
Length	67'	No. & Type of Engines	2 Turboprop
Combat Weight (Lbs.)	33,000	Model No.	Dart 514
Max. Range (Naut. Miles)	1,630	Mfr.	ROLLS ROYCE
Crew No.		Rating Each	1,600 eshp.



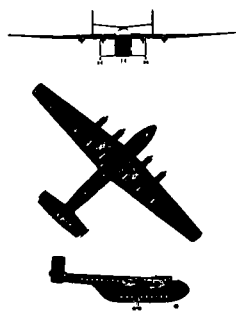
The Avro 748 is a twin-turboprop, low-wing craft designed for commercial feederliner use, normally carrying 40-44 passengers. The fuselage is conventionally formed with circular cross-section. Wings are thin and straight-tapered and integrally mounted low at the fuselage center section. Engines are mounted inboard on the upper wings with a large nacelle, to accommodate the main undercarriage, bulging below. The straight tapered vertical stabilizer is faired into the fuselage and has a squared off tip. The horizontal stabilizer is mounted on the fuselage. A military version of the Avro 748 was initially developed for the Indian Air Force.

BEVERLEY



BLACKBURN

Mfr	BLACKBURN	Max. Speed (Knots)	206
Wing Span	162'	Service Ceiling (Ft.)	15,700
Length	99'5"	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	135,000	Model No.	Centaurus 173
Max. Range (Naut. Miles)	3,000	Mfr.	BRISTOL
Crew No.	4	Rating Each	2,850 hp.



The Beverley is a four-engined, high-wing, heavy transport or cargo carrier. Recognition features include the shoulder-high wings, the huge forward section of the fuselage, the "boomlike" rear portion of the fuselage, and the rectangular twin fins and rudders centered at the ends of the horizontal stabilizer. A fixed, nose-wheel-type landing gear with four-wheel main units is fitted. Freight is loaded through two large clamshell doors at the rear of the forward portion of the fuselage. Over short ranges the Beverley can carry as many as 160 passengers. As a cargo carrier it can accommodate such things as heavy machinery, cranes, and tractors, without dismantling them.

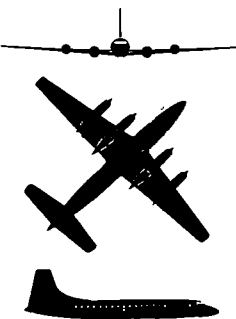
BRITANNIA



BRISTOL

DATA APPLY TO BRITANNIA C.1

Mfr.	BRISTOL	Max. Speed (Knots)	349
Wing Spon	142'	Service Ceiling (Ft.)	30,000
Length	124'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	180,000	Model No.	Proteus 255
Max. Range (Naut. Miles)	4,540	Mfr.	BRISTOL
Crew No.	3-5	Rating Each	4,310 eshp.

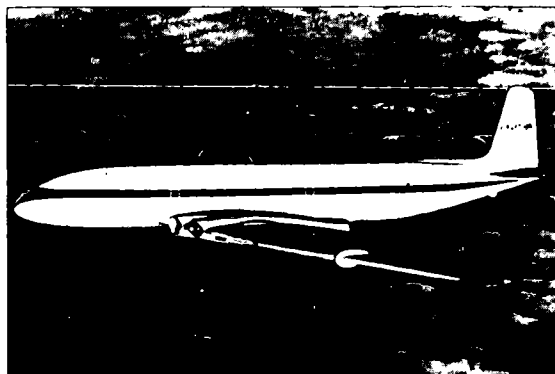


The Bristol Britannia is a turboprop cargo or passenger transport developed for military as well as civil use. Several versions were produced, including the RAF Transport Command standard Britannia C.1. Commercial versions are of the 300 Series. Recognition features include the longer-than-usual extension of the four engine nacelles ahead of the wings, the large vertical tail surfaces, and the engine exhausts extending over the wing trailing edge.

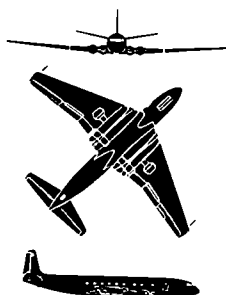
De HAVILLAND

COMET

DATA APPLY TO COMET 4C



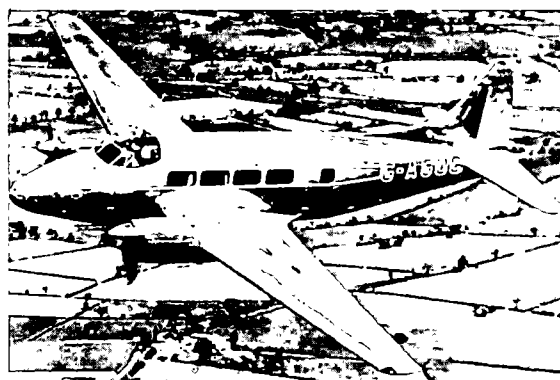
Mfr.	DE HAVILLAND	Max. Speed (Knots)	460
Wing Span	114'10"	Service Ceiling (Ft.)	39,000
Length	118'	No. & Type of Engines	4 Turbojet
Combat Weight (Lbs.)	162,000	Model No.	Avon 525B
Max. Range (Naut. Miles)	3,720	Mfr.	ROLLS ROYCE
Crew No.	4	Rating Each	10,500 #



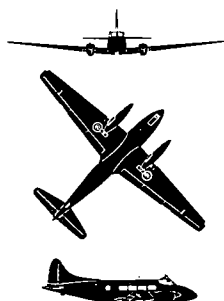
The Comet was the world's first jet transport to be placed in scheduled service. This service was inaugurated by B.O.A.C. in May 1952 on the London-Johannesburg route, but was temporarily interrupted because of structural difficulties with the aircraft. The Comet has very thin wings with the semiburied engines placed close to the fuselage. While the wings have moderate sweepback, the tail surfaces are straight. Controls are power operated and the cabin is pressurized. Some Comets have rocket installations between the engines. This aircraft has found use on airlines of other countries including Argentina, Greece, Mexico, and Egypt.

De HAVILLAND

DEVON



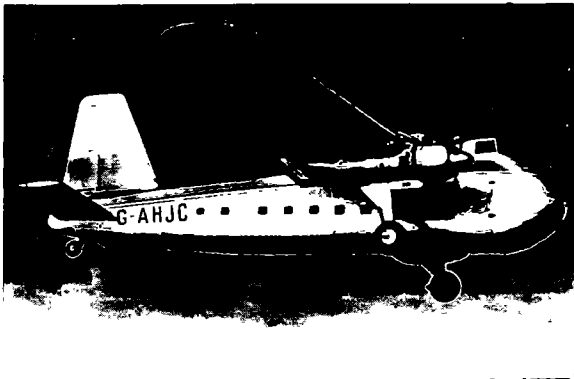
Mfr.	DE HAVILLAND	Max. Speed (Knots)	175
Wing Span	57'	Service Ceiling (Ft.)	
Length	39'3"	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	8,800	Model No.	Gypsy Queen-70 Mk-2
Max. Range (Naut. Miles)	850	Mfr.	DE HAVILLAND
Crew No.	2	Rating Each	380 hp.



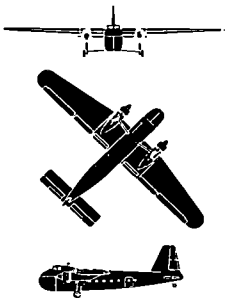
The Devon twin-engine, low-wing light transport is a military version of the de Havilland 104 Dove. The Devon is used for communications duties within the RAF and for the use of British Air Attachés abroad. Its in-line engine nacelles extend well beyond the leading edge of the wings which taper on both the leading and trailing edges to well-rounded tips. A single tail is fitted with a large dorsal fin, and the landing gear is of the retractable tricycle type. The Devon can carry either 1,975 pounds of cargo or eleven passengers. A Royal Navy version of the Devon is designated the Sea Devon.

BRISTOL

FREIGHTER



Mfr.	BRISTOL	Max. Speed (Knots)	195
Wing Span	108'	Service Ceiling (Ft.)	23,000
Length	68'4"	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	44,000	Model No.	Hercules 734
Max. Range (Naut. Miles)	820	Mfr.	BRISTOL
Crew No.	3	Rating Each	1,980 hp.



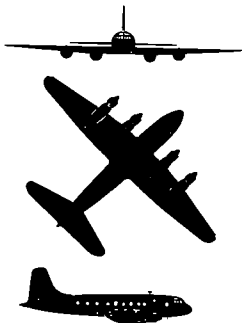
The Bristol Freighter is a high-wing, twin-engined, cargo-passenger aircraft. There are many variations of the Freighter, ranging between a cargo version with a capacity of 12,000 lbs. and a passenger version with accommodations for 36 passengers. The military version can be used as a navigational trainer with equipment for 14 students and their instructors. The Freighter has a bulldog aspect, which gives it a distinctive appearance. The dorsal fin on the military version and the squared-off wing tips of the earlier versions are good recognition features.

HANDLEY PAGE

HASTINGS

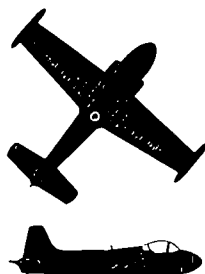


Mfr.	HANDLEY-PAGE	Max. Speed (Knots)	303
Wing Span	113'	Service Ceiling (Ft.)	24,000
Length	81'8"	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	80,000	Model No.	Hercules-106
Max. Range (Naut. Miles)	4,250	Mfr.	BRISTOL
Crew No.	5	Rating Each	1,675 hp.



The Handley-Page Hastings is a low-wing, four-engined, long-range, military transport. The wings taper sharply on the leading edge to rounded tips and the engines are underslung on the wings, with the inboard nacelles slightly forward of the outboard nacelles. The fuselage is circular in cross section. There is a single fin with a rudder, and a horizontal stabilizer tapering on the leading edge to rounded tips. A conventional landing gear is utilized. The Hastings is employed as a freighter, paratroop transport, ambulance, troop carrier, supply dropper, and glider tug. It is in service with the Royal Air Force and the Royal New Zealand Air Force.

HUNTING PERCIVAL



The Jet Provost two-seat, single-jet basic trainer is a development of the piston-engine Provost and retains some of that aircraft's structural features. Instructor and student sit side by side in the cockpit. The low-mounted unswept wings have squared-off tips as do the tail components. Later versions have wing-tip tanks. The aircraft can be fitted with guns and underwing stores for use in a light attack or police role.

JET PROVOST

DATA APPLY TO JET PROVOST MK.4

Mfr.	HUNTING	Max. Speed (Knots)	380
Wing Span	36'11"	Service Ceiling (Ft.)	30,000 plus
Length	32'5"	No. & Type of Engines	1 Turbojet
Combat Weight (Lbs.)	7,200	Model No.	Viper 200
Max. Range (Naut. Miles)	600	Mfr.	BRISTOL-SIDDELEY
Crew No.	2	Rating Each	2,500 #

HUNTING PERCIVAL



PROVOST

Mfr.	HUNTING PERCIVAL	Max. Speed (Knots)	175
Wing Span	35'2"	Service Ceiling (Ft.)	22,500
Length	29'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	4,400	Model No.	P-56
Max. Range (Naut. Miles)	600	Mfr.	ALVIS LEONIDES
Crew No.	2	Rating Each	550 hp.

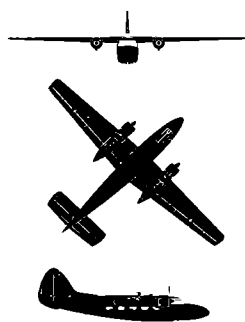
The Provost, first known as the P. 56, is a side-by-side trainer designed for the RAF. It is fully aerobatic, has a maximum endurance of almost five hours, and has been designed with special regard to easy maintenance and servicing. The Provost has a fixed landing gear, pneumatically operated flaps, amber screens for blind flying, full blind-flying panel, and 12-channel V.H.F. Handling reports describe the aircraft as pleasant and easy to fly. A feature of the Provost is its control response. Its rate of roll and handling qualities are reminiscent of a fighter's. At 220 knots, it completed a full roll to the left in 3.4 seconds.

SEA PRINCE/PEMBROKE

HUNTING PERCIVAL



Mfr.	HUNTING PERCIVAL	Max. Speed (Knots)	200
Wing Span	64'6"	Service Ceiling (Ft.)	22,000
Length	46'	No. & Type of Engines	2 Piston
Cambat Weight (Lbs.)	13,500	Model No.	Mk 12701
Max. Range (Naut Miles)	1,000	Mfr.	ALVIS LEONIDES
Crew No.	2-4	Rating Each	540/560 hp.



The Sea Prince is a light, twin-engined, high-wing transport used by the Royal Navy for crew training and communications. It is equipped with an extended nose for a navigator-observer station. The standard cabin arrangement provides for the seating of eight passengers plus a crew of two. Nacelles are underslung on a flat narrow wing, with the taper of the trailing edge of the wing more pronounced than that of the leading edge. A large, rounded fin is fitted with a dorsal fairing extended forward. A civil version of the Sea Prince, designated the Prince, is used as a passenger and cargo transport. The RAF has an eight-seat version with increased take-off weight called the Pembroke. A recent development of the Pembroke, designed for the civil market, is designated the President.

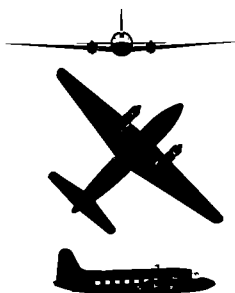
VALETTA/VARSITY

VICKERS-ARMSTRONGS

DATA APPLY TO VALETTA

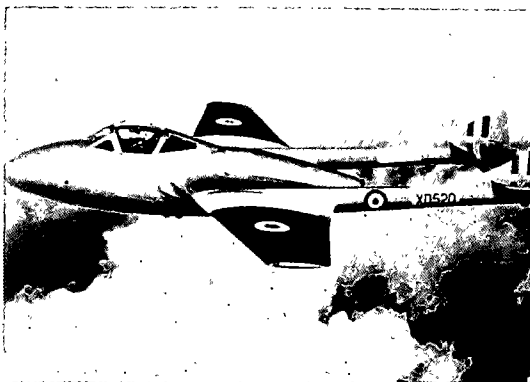
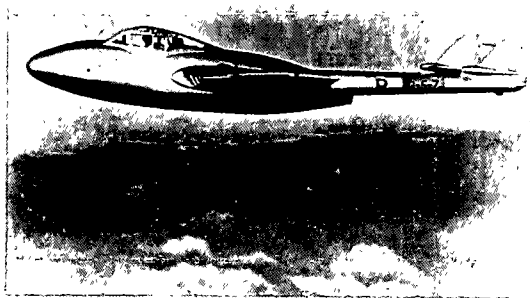


Mfr.	VICKERS-ARMSTRONGS	Max. Speed (Knots)	208
Wing Spon	95'6"	Service Ceiling (Ft.)	22,000
Length	67'6"	No. & Type of Engines	2 Piston
Cambat Weight (Lbs.)	30,000	Model No.	Hercules 230/264
Max. Ronge (Naut Miles)	1,410	Mfr.	BRISTOL
Crew Na	2-4	Rating Each	1,975 hp.



The Valetta is a twin-engined, low-midwing, medium-range transport. It is fitted with a single fin and rudder and a retractable conventional landing gear. The wings are tapered on both the leading and trailing edges and have rounded tips. The Valetta has a rather thick, cigar-shaped fuselage and differs from the Varsity in minor respects only. The main differences are in the Valetta's enlarged main door and reinforced floor, and the increased size of the crew compartment to accommodate a navigator as the fourth crew member. It can carry a freight load of 8,000 lbs or 36 troops. The Varsity is a general-purpose aircrew-trainer version of the Valetta. Its wing and forward fuselage section are slightly larger. The photograph and silhouette are of the Valetta.

De HAVILLAND

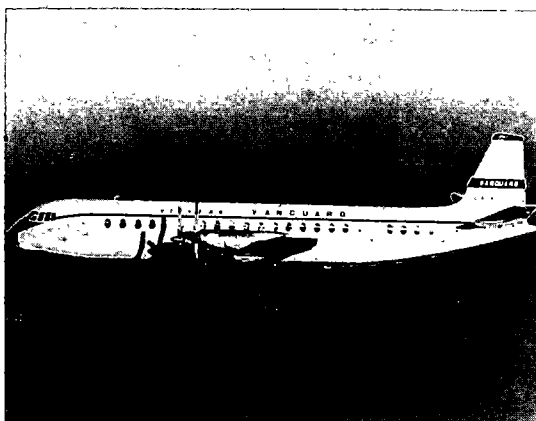


VAMPIRE TRAINER

Mfr.	DE HAVILLAND	Max. Speed (Knots)	478
Wing Span	38'	Service Ceiling (Ft.)	20,000
Length	34'6½"	No. & Type of Engines	1 Turbojet
Combat Weight (Lbs.)	11,150	Model No.	Goblin 35
Max. Range (Naut. Miles)	853	Mfr.	DE HAVILLAND
Crew No.	2	Rating Each	3,500 #

The Vampire T.11 is the trainer version of a series of twin-boom, single-jet British fighters, and was one of the first to feature side-by-side seating for instructor and student. Its wings are straight and evenly tapered from the roots, where the air intakes are located, to the squared-off tips. Seated ahead of the wing leading edges, the crew have excellent visibility. Twin fins and rudders are mounted above the tail booms, with a single rectangular elevator mounted between them with extensions outside the booms.

VICKERS



VANGUARD

DATA APPLY TO VANGUARD 952

Mfr.	VICKERS	Max. Speed (Knots)	460
Wing Span	118'	Service Ceiling (Ft.)	20,000
Length	122'10½"	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	141,000	Model No.	Tyne 512
Max. Range (Naut. Miles)	2,730	Mfr.	ROLLS ROYCE
Crew No.	2-3	Rating Each	5,545 eshp.

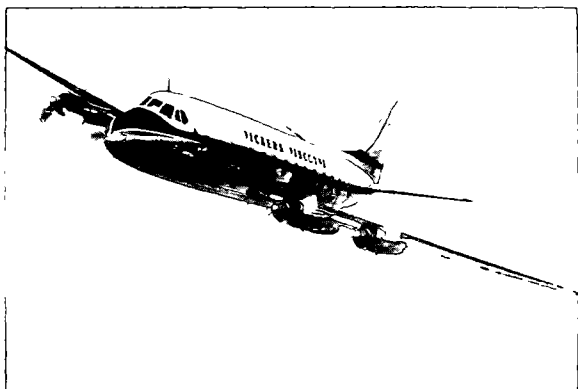


The Vanguard is a four-turboprop, medium-haul civil airliner designed for fast, economical operation over medium-haul routes. A significant recognition feature is the aircraft's two-deck, "double bubble" fuselage which provides accommodations for up to 139 passengers above and generous cargo stowage below. The unswept, midmounted wings are moderately tapered and have a slight dihedral. The four engines are wing-mounted, with nacelles extending forward of the leading edge; the two inboard nacelles, into which the main landing gear retracts, are larger below. The tall vertical stabilizer has a rounded off tip and a short fairing into the fuselage. The fuselage-mounted horizontal stabilizer generally follows the wing outline but has considerable dihedral. At least three versions of the Vanguard have been developed but they all have the same basic characteristics. The standard aircraft is based on the Vanguard 952.

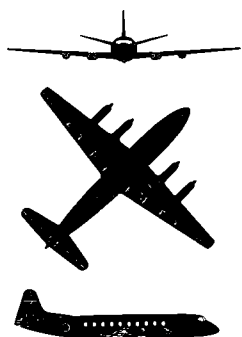
VISCOUNTS

VICKERS-ARMSTRONGS

DATA APPLY TO VISCOUNT 810



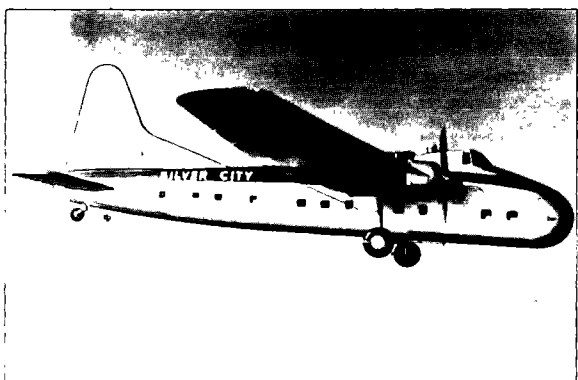
Mfr.	VICKERS-ARMSTRONGS	Max. Speed (Knots)	309
Wing Span	93'8"	Service Ceiling (Ft.)	28,000
Length	85'8"	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	72,500	Model No.	Dart 525
Max. Range (Naut. Miles)	1,530	Mfr.	ROLLS ROYCE
Crew No.	3-4	Rating Each	1,990 eshp.



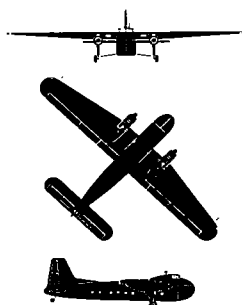
The four-turboprop Viscount is the first turboprop transport to be flown by a scheduled airline. Among its recognition features are the four engines protruding forward of the leading edge of the low-mounted wing, the equitapered wing and horizontal stabilizer, the horizontal stabilizer mounted on the fuselage, and the equitapered vertical stabilizer with its rounded tips and dorsal fin. A number of versions of the Viscount have been built. The type 700 is a development of the type 630 with a lengthened fuselage and increased wing span and will accommodate 40 to 48 passengers. Numerous versions of the 700 are in service with airlines throughout the world. Latest of the Viscount variants, the 800 series, has an added 46-inch bay in the fuselage.

WAYFARER

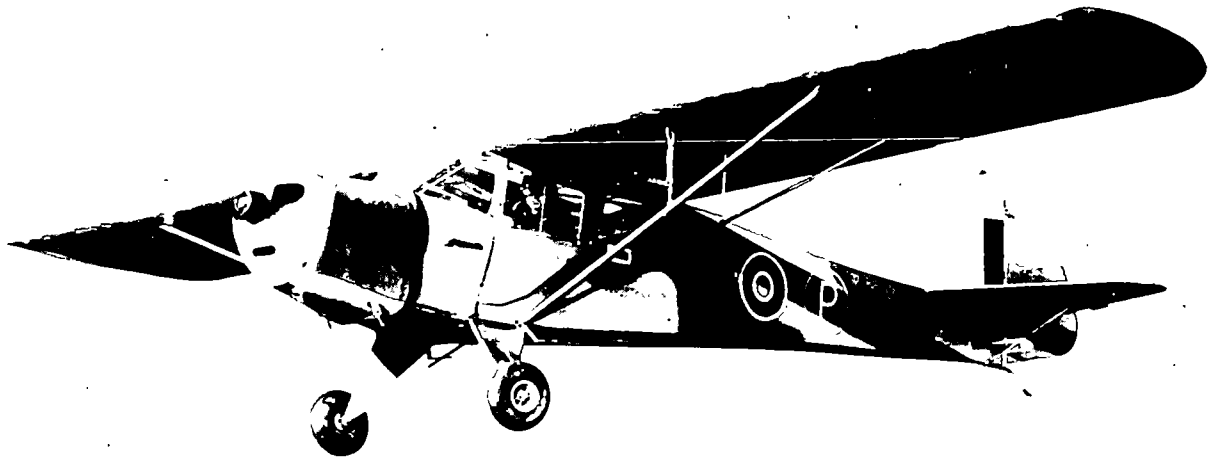
BRISTOL



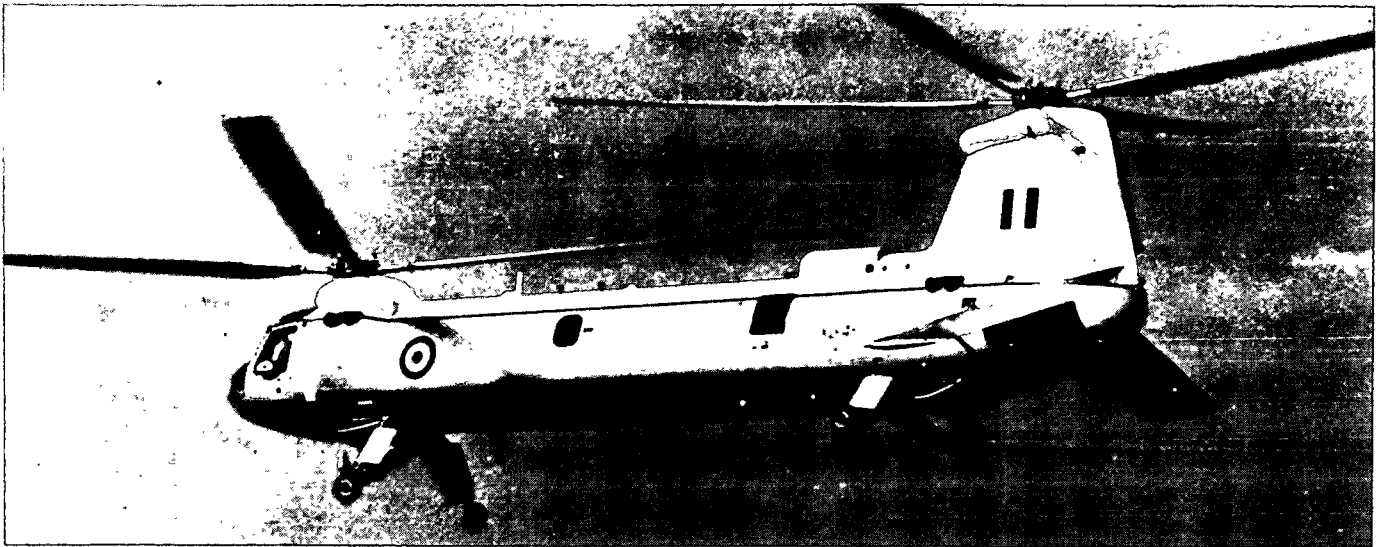
Mfr.	BRISTOL	Max. Speed (Knots)	195
Wing Span	108'	Service Ceiling (Ft.)	23,000
Length	64'4"	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	40,000	Model No.	Hercules 672
Max. Range (Naut. Miles)	600-1,000	Mfr.	BRISTOL
Crew No.	4	Rating Each	1,700 hp.



The Wayfarer is a two-engined, high-wing transport. Recognition features include the huge bulbous forward portion of the fuselage; the large, square-tipped, vertical tail that fairs into the fuselage; and the conventional fixed-type landing gear with the main wheels attached to the underside of the engine nacelles. The center section of the wing's leading edge is straight and the outer section is tapered, while the trailing edge is straight. Both the wing and the horizontal tailplane have rounded tips. The Wayfarer was designed to carry a high payload on short-range hops (12,000 lbs for 380 miles).



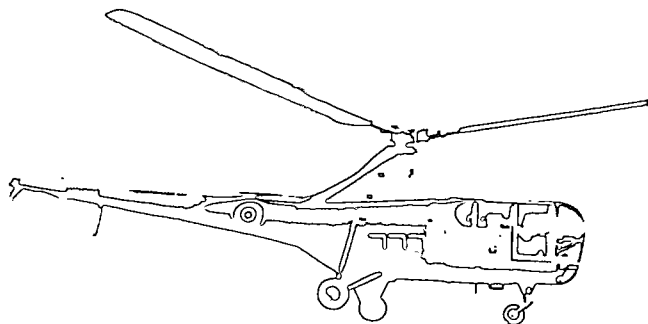
The AUSTER is a light observation and utility aircraft.



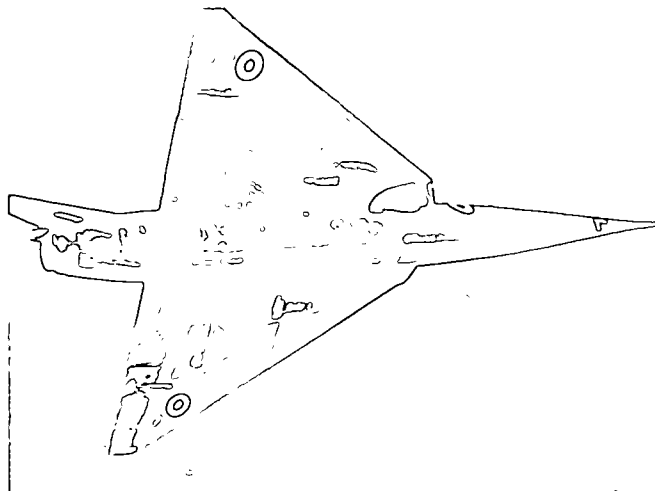
The BELVEDERE is a dual-rotor transport helicopter.



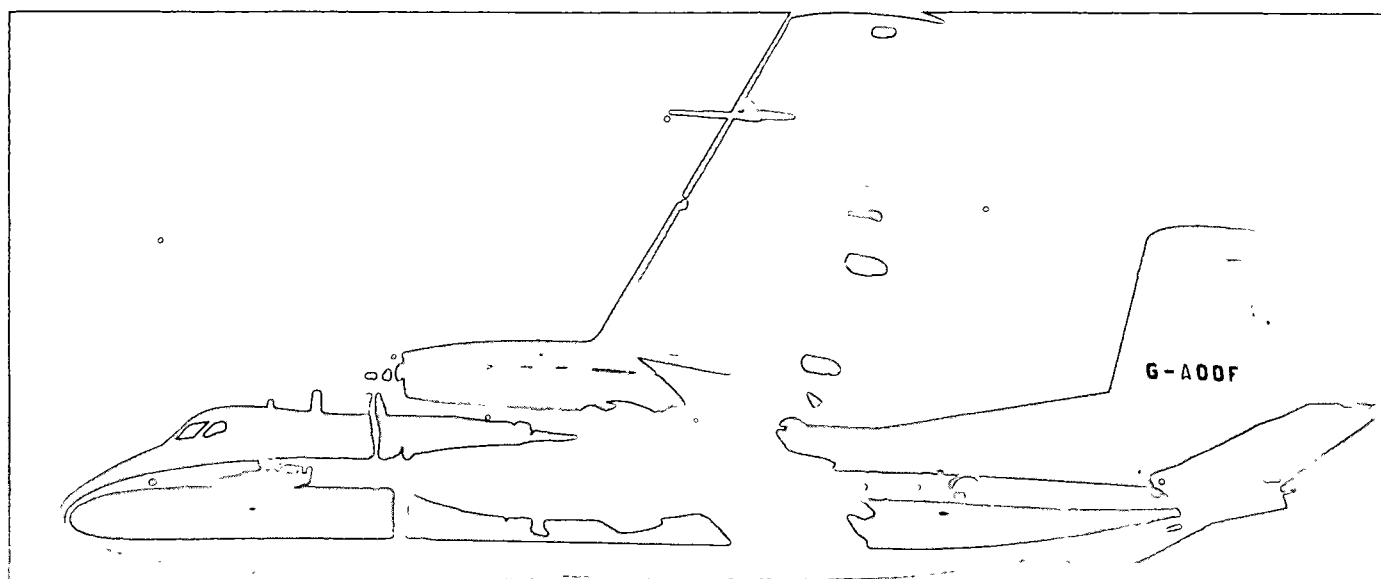
The BRITANNIC is distinguished by the high-mounted wing and long, slender engine nacelles.



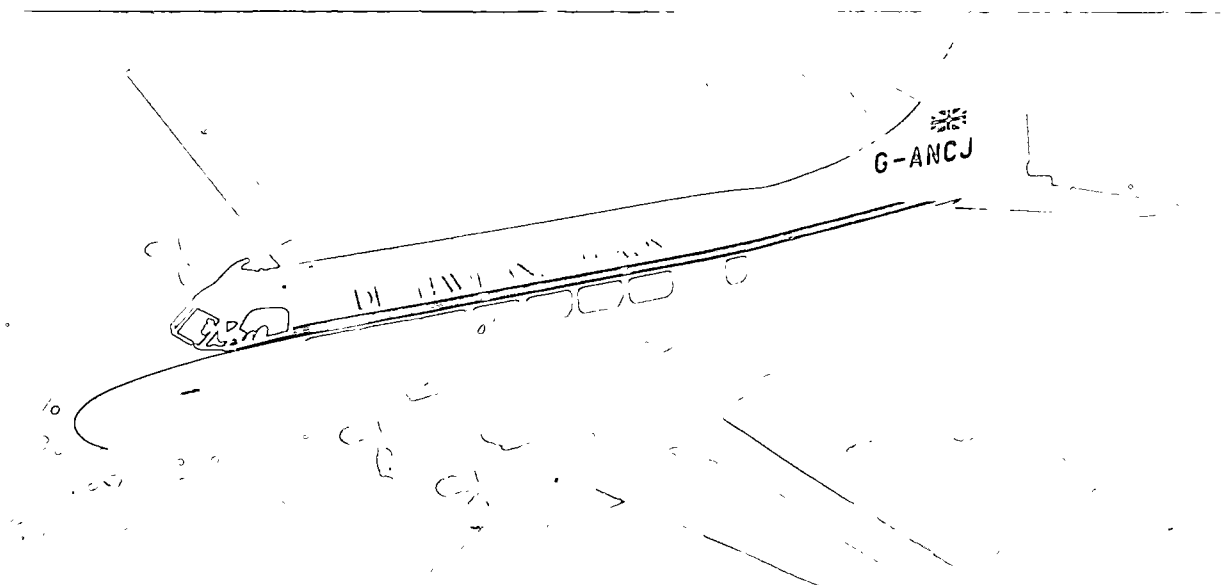
The **DRAGONFLY** is an English-built version of the Sikorsky S-51 helicopter.



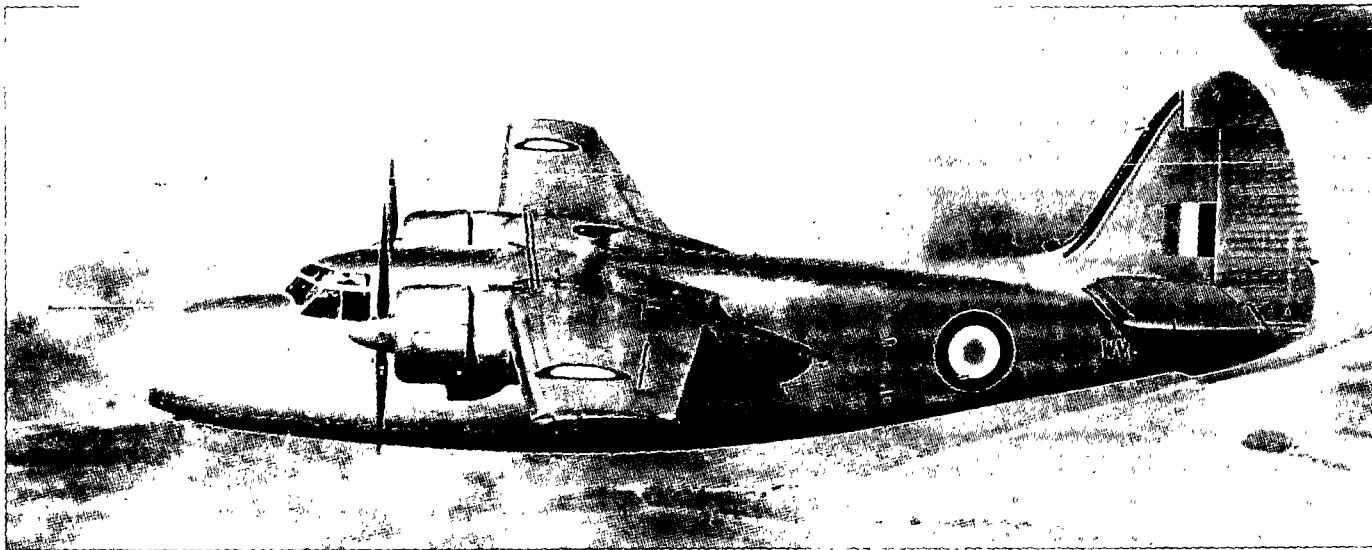
The **FAIREY FD-2** has a clipped delta wing and a needlelike nose.



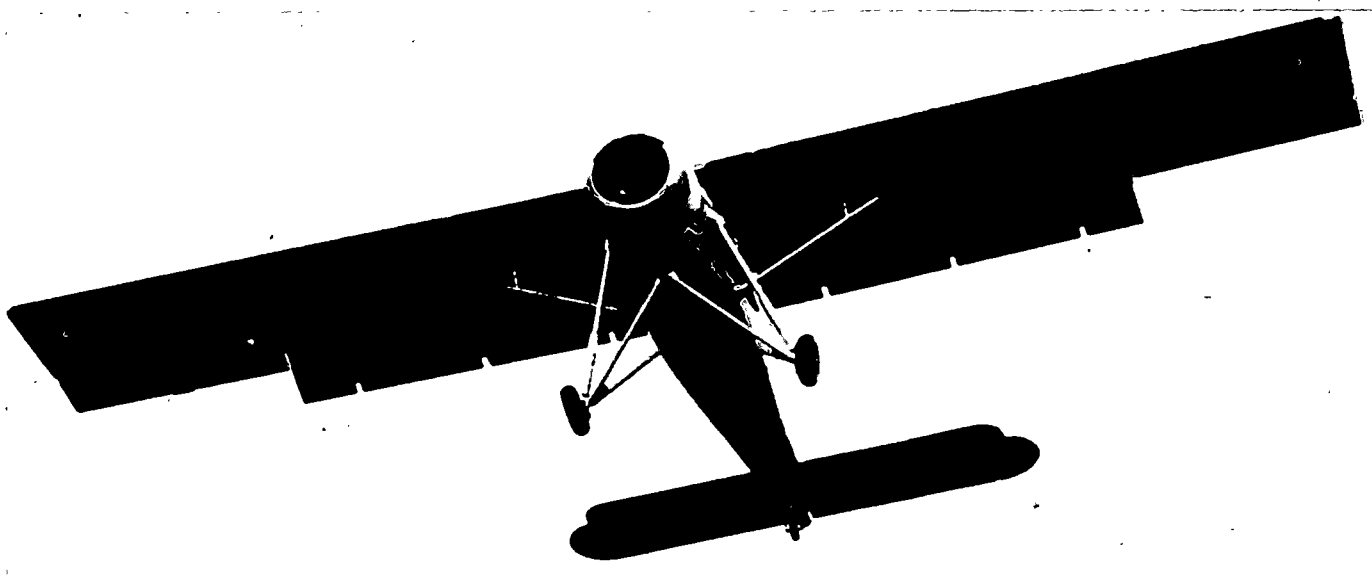
The **HERALD** has long, projecting engine nacelles.



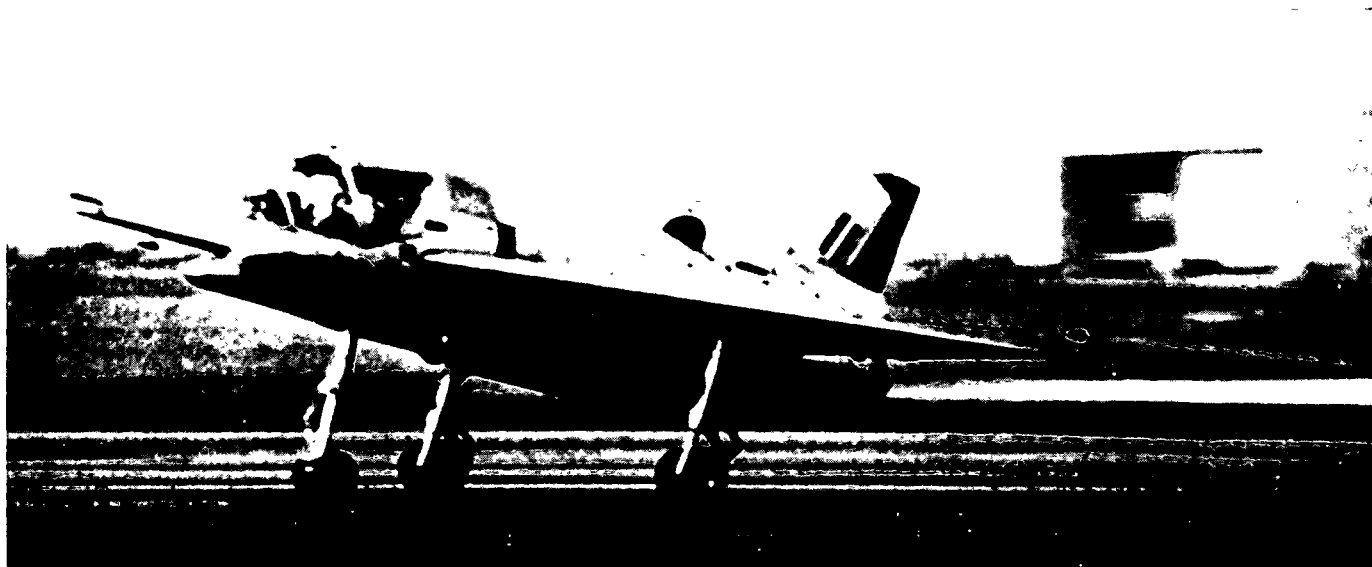
The **HERON** is a commercial airliner capable of carrying 14 to 17 passengers.



The PEMBROKE is an eight-seat light transport.



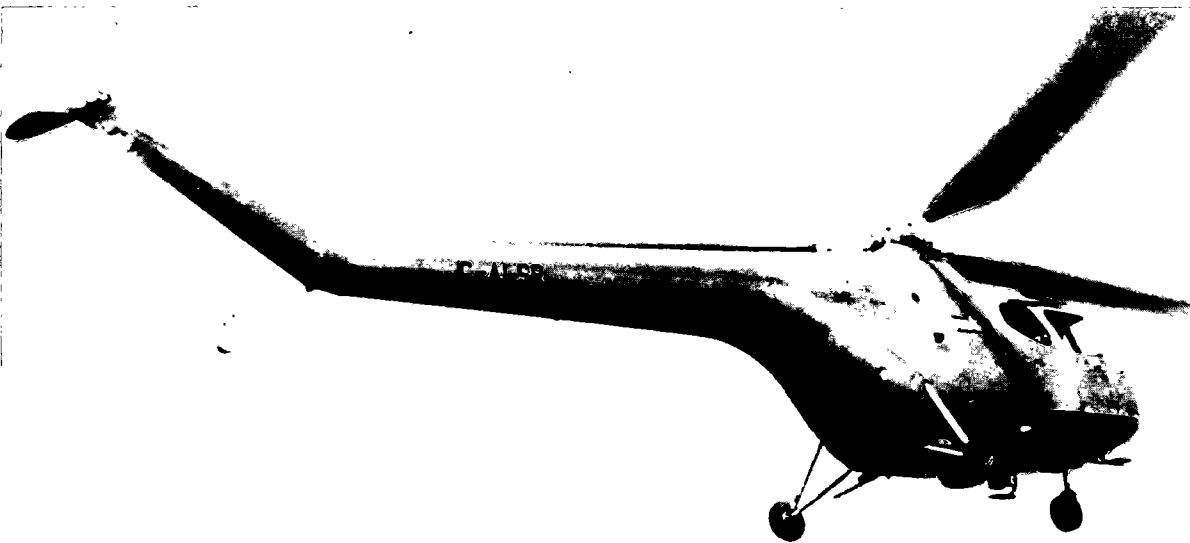
The PIONEER was designed for operation from small landing fields.



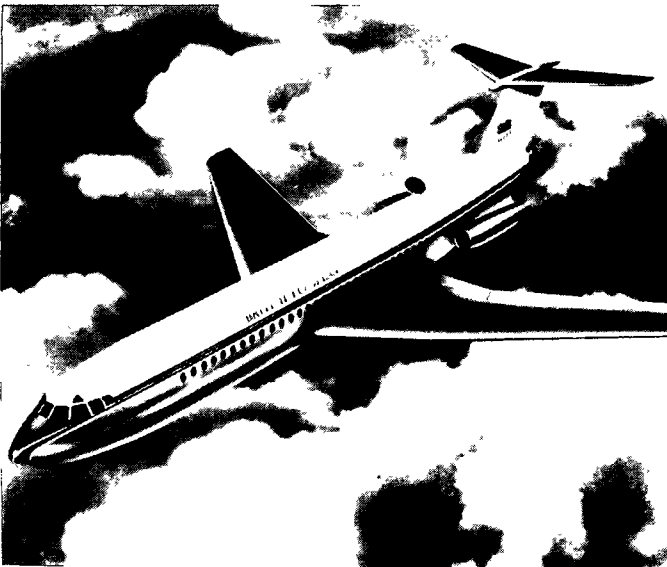
The SC. 1 can go from VTO to forward flight.



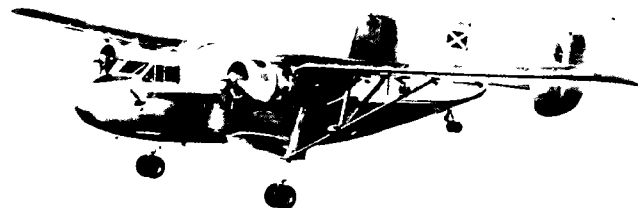
The SKEETER is equipped with a rocket booster system that provides extra power for short periods.



The SYCAMORE is used as a commercial transport and for military and naval purposes.



The TRIDENT (D.H. 121) is a three-jet, short-haul transport.



The TWIN PIONEER is a military and civil transport.



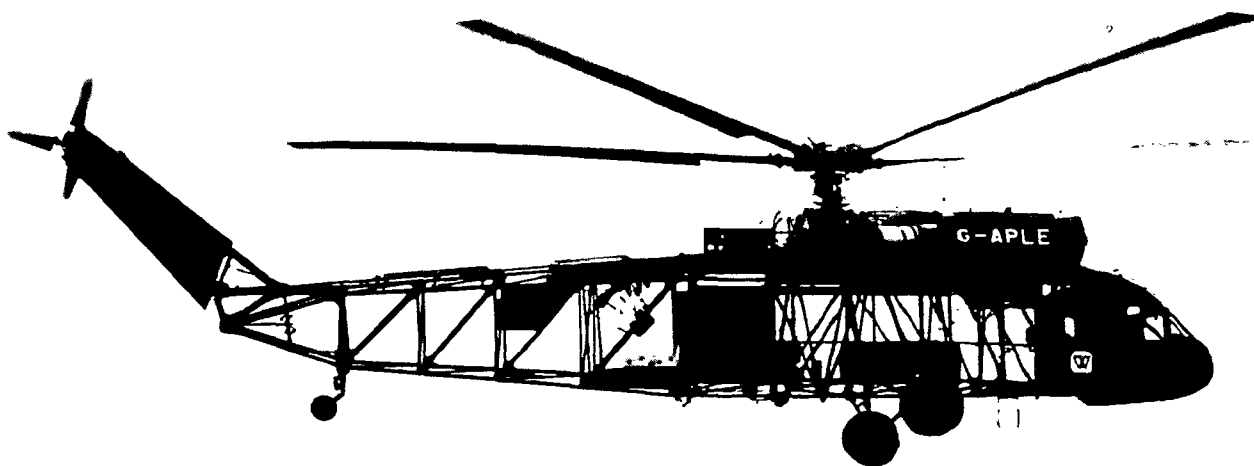
The VC. 10 airliner is the first aircraft to have four jet engines mounted at the fuselage rear.



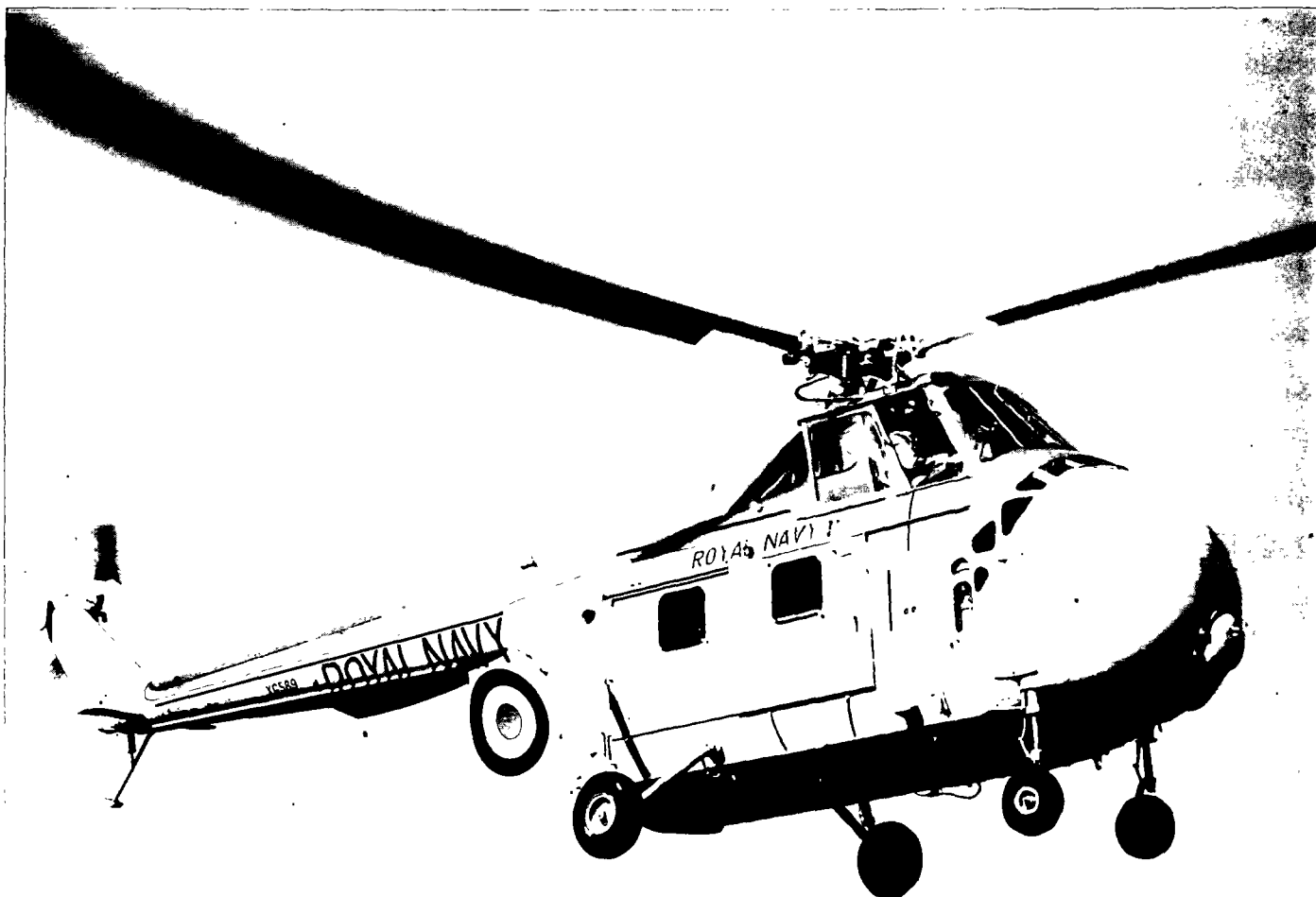
The WASP is a general-purpose helicopter. The Royal Navy version is called the SEASPRITE.



The WESSEX ASW helicopter is the Sikorsky S-58 built under British license.

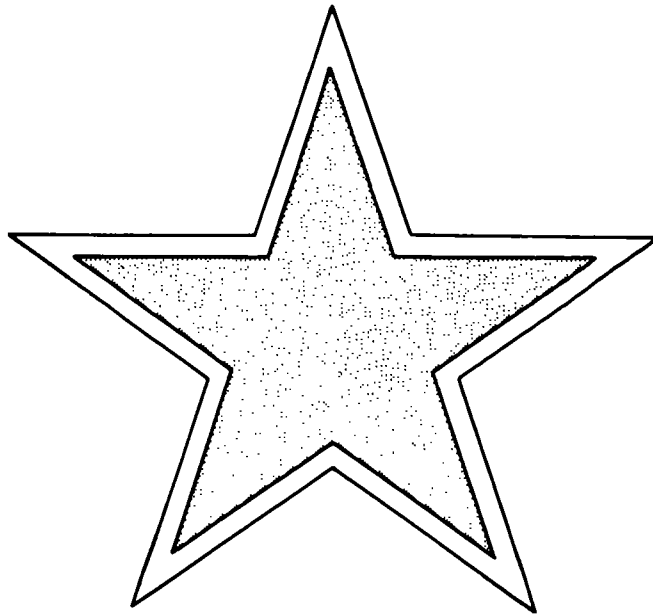


The WESTMINSTER is a turbine-powered transport helicopter.



The WHIRLWIND is the first helicopter built in England specifically for antisubmarine duties.

MAJOR
U. S. S. R.
AIRCRAFT



MAJOR

U.S.S.R.
MAJOR

(The Union of Soviet Socialist Republics)

The Soviet Air Forces

Within the Soviet Ministry of War, the Air Force of the Soviet Army includes Tactical Aviation, Fighter Aviation of the Air Defense System, Aviation of Airborne Troops, and Long Range Aviation.

There is also a civil air fleet, which fills the air transport requirements of the U.S.S.R. These military components are organized into air armies, each composed usually of three corps, further subdivided into three divisions per corps.

Each air division is composed of three air regiments. The air regiment is the basic tactical unit of all Soviet air forces. Within this unit there are three squadrons with approximately 30 to 50 aircraft, depending upon the regiment's role.

The Soviet Union today is said to have an air force of upwards of 20,000 operational aircraft including jet fighters; light, medium, and heavy jet bombers; and medium, piston-engine bombers.

Soviet Naval Aviation

Naval aviation in the Soviet Union has not developed along the same lines as in the United States, nor has it received equivalent attention. Emphasis during the "Great Patriotic War" was placed on land power backed up by a strong tactical air force.

Naval aviation is an integral element of the Soviet Navy and is therefore administered independently from the other components of military aviation. Overall technical policy and administrative control of naval aviation is vested in the Commander in Chief of Naval Aviation with headquarters in Moscow. He is subordinate to the Commander in Chief of the Navy, who, in turn, is responsible to the Ministry of the Navy. Operational or combat control

over the various fleet air forces is vested in their respective fleet commanders.

Principal subdivisions in the organization of naval aviation are: (a) fleet air forces, (b) air divisions, and (c) air regiments. The Soviet Navy is organized on a geographical basis into such fleets as the Pacific, Baltic, Northern, and Black Sea fleets. Fleet air forces are assigned to these areas as a part of these fleets. All personnel have Army rank and grade designations. Soviet naval aviation is said to be composed of more than 3,000 aircraft. It is land based, having no aircraft carriers from which to operate.

Soviet Aircraft Designations

Aircraft factories in the Soviet Union and its satellite countries are state controlled, and all aircraft production is undertaken in state factories. The design of aircraft is carried out in these state factories by a small group of experts who have their own design staffs. It is not unusual for successful designers to be awarded high rank in the Engineering Service of the Soviet Air Forces, which accounts for the military rank sometimes added to a designer's name.

On the other hand, unsuccessful designs have led to prison terms. This is by no means the end, for the Soviets have a practical outlook and have been known to allow the convicted designer to continue his work in prison. Under these conditions some prize-winning designs have been created, providing liberation for the convict.

Between the years 1925 and 1940, Soviet aircraft were designated according to the duties for which designed. An example is the UT-2, Uchebny Trenirovochny, instructional and training, designed in 1939 by Yakovlev, series number 2.

The following list shows the old designations by functional letters:

<i>Type Symbol</i>	<i>Purpose</i>
I	Fighter
DI	Two-Seat Fighter
BSH	Armored Dive Bomber
BB	Short-Range Bomber
SB	Medium Bomber
DB	Long-Range Bomber
TB	Heavy Bomber
MI	Navy Fighter
MT	Mining and Torpedo
PB	Dive Bomber
R	Reconnaissance
PS	Transport
MR	Reconnaissance Seaplane
MBR	Short-Range Reconnaissance Sea-plane
MDR	Long-Range Reconnaissance Sea-plane
KOR	Shipborne
U	Elementary Training
UT	Advanced Trainer
A	Autogiro

Examples of the change of designation:

BB-22	Became Yak-4
PB-100	Became Pe-2
TB-7	Became Pe-8
DB-3f	Became Il-4
U-2	Became Po-2
BSH	Became Il-2
PS-80	Became Li-2

The present system of aircraft designation is apparently directly copied from that which the Germans employed, whereby aircraft were associated with their designers (e.g., "He" for Heinkel), and not directly with their role. Thus, aircraft and engines are designated by the initials or an abbreviation of the designer or the design team names, followed by a hyphen and a number. The numbers are not always in the correct order of sequence. Furthermore, the Soviets apparently have no positive system of differentiating between subtypes and modified versions with an added nose wheel.

The fact that an aircraft is the most recent design of a Soviet designer does not mean that the next highest number will be assigned; certain earlier numbers of experimental or preliminary designs have been adopted for a later design.

An obvious example is the Yak-3, which

was developed from the Yak-9, both designed by Alexander S. Yakovlev. A more recent example is the Tu-4 (USSR B-29); a Tu-4 design, not similar to the present aircraft of that designation, was under way during World War II but was never placed in production. Nevertheless, it has been observed that the Soviets are adhering to a general application of odd and even numbers to specific categories. Odd numbers are generally fighters or fighter trainers (La-7; MIG-9; Yak-15, etc.) while even numbers apply to all other types (Pe-8, bomber; Il-12, transport; etc.).

A few Soviet aircraft have, from time to time, been given names, the widely publicized "Stormovik" and "Maxim Gorki" are instances. Others are the helicopter "Flying Wagon" (Yak-24) and the transport "Ukrainia" (Am-10).

The following list shows the more important designers, abbreviated by name in alphabetical order.

AN	Antonov
Be	Beriev
BI	Berendjak and Issariev
Er	Ermolaev
Il	Ilyushin
Ka	Kamov
Kli	Klimov
La	Lavochkin
LAGG	Lavochkin, Gorjunov and Gudkov
Li	Lisitsin
Mi	Mil
MIG	Mikoyan and Gurevich
Mik	Mikulin
Mil	Mil
Pe	Petlyakov
Po	Polikarpov
SHCHE	Shchervbakov
Shv	Shvetsov
Su	Sukhoi
Tu	Tupolev
Yak	Yakovlev

During World War II a large number (said to be more than 13,000) of American-

type aircraft were transferred to the U.S.S.R. under Lend Lease. Their designations were retained—i.e., the P-63 “King Cobra.” Foreign aircraft made in Russia under license were, however, given a straight Soviet designation. An example is the “Skytrain” (DC-3/C-47/R4D) which was renamed the Li-2. Training versions of a few of the operational fighters carry the prefix “U”—thus the Ula-7, UYak-3, UMIG-15, UII-28, etc. Specially designed operational trainers were being turned out, such as the Yak-11 fighter-trainer.

Soviet Aircraft Designation System

There has been a longstanding requirement for a simple system for designating Soviet aircraft. Such a system has been developed and introduced for use by the military services.

This new designation system consists of five major categories of Soviet aircraft with names assigned to each aircraft bearing an initial letter descriptive of its operational role, as follows:

“F” for fighters.

“B” for bombers.

“C” for cargo-transport.

“H” for helicopters.

“M” for miscellaneous aircraft which will include all types of aircraft other than the first four named.

Names of one syllable, bearing the appropriate initial letter, will be used to designate propeller-driven aircraft including those driven by turboprop engines. Names of two syllables, bearing the proper initial letter, will be assigned to jet-propelled aircraft.

The new designations will not be adopted for Soviet aircraft that are obsolescent or unlikely to appear in frontline service. A name assigned to an aircraft in conformance with the system will not be altered in the event additional characteristics or change in operational role of this aircraft later become known, unless such changes

involve distinguishable recognition differences.

This system of naming Soviet aircraft is an improvement from many points of view. One in particular will tend to obviate the variety of Soviet spelling, designations, numbers, and designers allotted Soviet aircraft by all and sundry. This condition, of course, tends to bewilder and confuse the issue.

A parallel system of Japanese code names existed during World War II. The use of easily remembered names such as those of boys and girls was officially introduced to meet an emergency and it proved the only way in the Pacific to save life and reduce casualties suffered through faulty identification. This code name system proved to be the way to teach the bulk of personnel Japanese aircraft, which had highly complicated designations. “Val” was a name easy to remember, but the “Aichi 99” was a different matter altogether.

In introducing names for Soviet aircraft, it is not intended that all the designations and background knowledge on Soviet aircraft should be forgotten. It should act as a spur to find out what is behind the name.

U.S.S.R.

Type	Designation	Manufacturer	Country
Fighter	Fagot (MIG-15)	Mikoyan-Gurevich	U.S.S.R.
	Fresco (MIG-17)	Mikoyan-Gurevich	U.S.S.R.
	Farmer (MIG-19)	Mikoyan-Gurevich	U.S.S.R.
	Flashlight (YAK-25)	Yakolev	U.S.S.R.
	Fitter/Fishpot	Sukhoi	U.S.S.R.
	Fishbed	Sukhoi	U.S.S.R.
Light Bomber	Beagle (IL-28)	Ilyushin	U.S.S.R.
	Bull (TU-4)	Tupolev	U.S.S.R.
Medium Bomber	Badger (TU-16)	Tupolev	U.S.S.R.
	Bull (TU-4)	Tupolev	U.S.S.R.
Heavy Bomber	Bison	Myasishched	U.S.S.R.
	Bear (TU-95)	Tupolev	U.S.S.R.
Reconnaissance	Madge (BE-6)	Beriev	U.S.S.R.
Transport	Cleat (TU-114)	Tupolev	U.S.S.R.
	Camel (TU-104)	Tupolev	U.S.S.R.
	Coot (IL-18)	Ilyushin	U.S.S.R.
	Cat (AN-10)	Antonov	U.S.S.R.
	Crate (IL-14)	Ilyushin	U.S.S.R.
	Cab (Li-2)	Lisitsin	U.S.S.R.
	Cooker (TU-110)	Tupolev	U.S.S.R.
	Cart (TU-70)	Tupolev	U.S.S.R.
	Camp (AN-8)	Antonov	U.S.S.R.
	Cub (AN-12)	Antonov	U.S.S.R.
	Colt (AN-2)	Antonov	U.S.S.R.
Helicopter	Hare (MI-1)	Mil	U.S.S.R.
	Hound (MI-4)	Mil	U.S.S.R.
	Horse (YAK-24)	Yakolev	U.S.S.R.
	Hen (KA-15)	Kamov	U.S.S.R.
	Hog (KA-18)	Kamov	U.S.S.R.
	Hook (MI-6)	Mil	U.S.S.R.
Trainer	Midget U-MIG-15	Mikoyan-Gurevich	U.S.S.R.

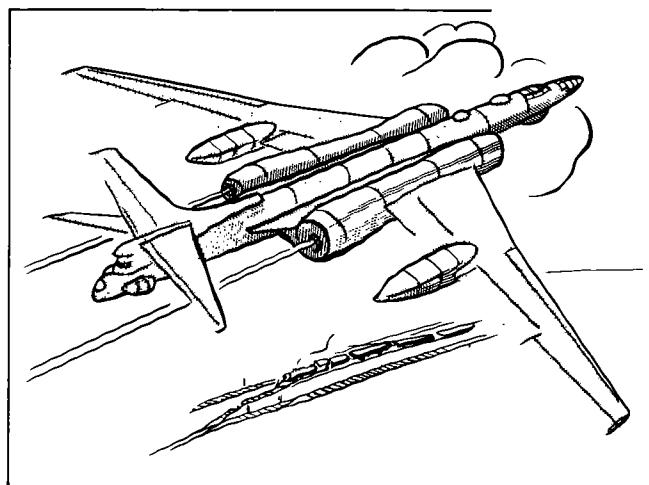
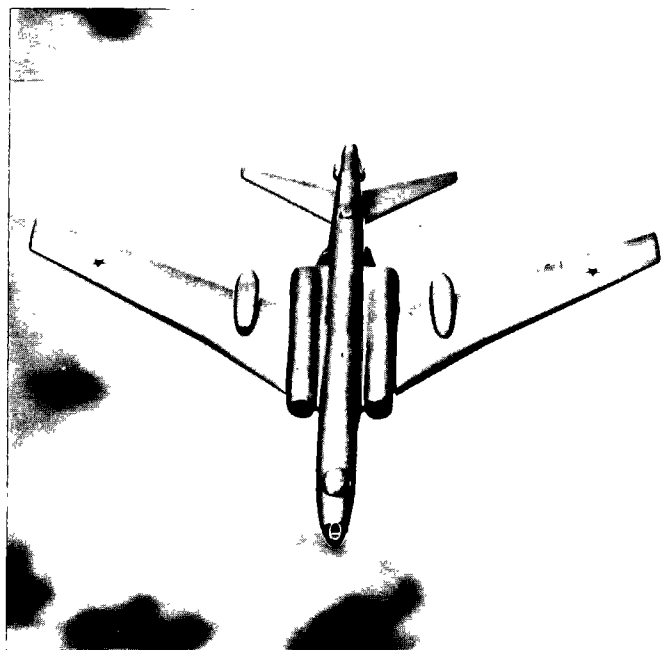
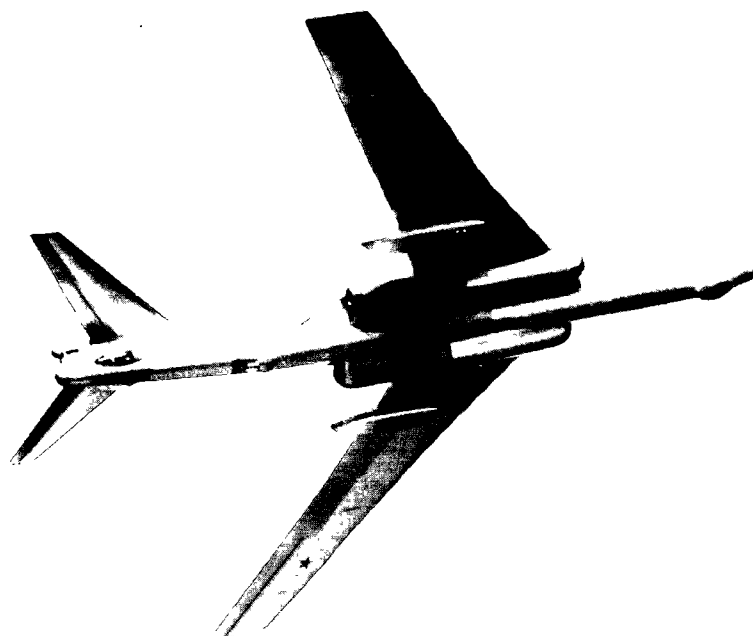


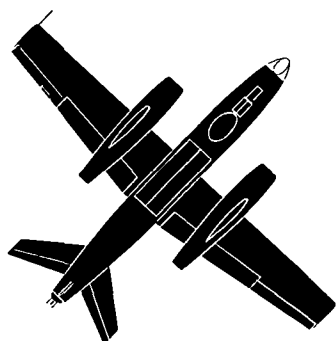
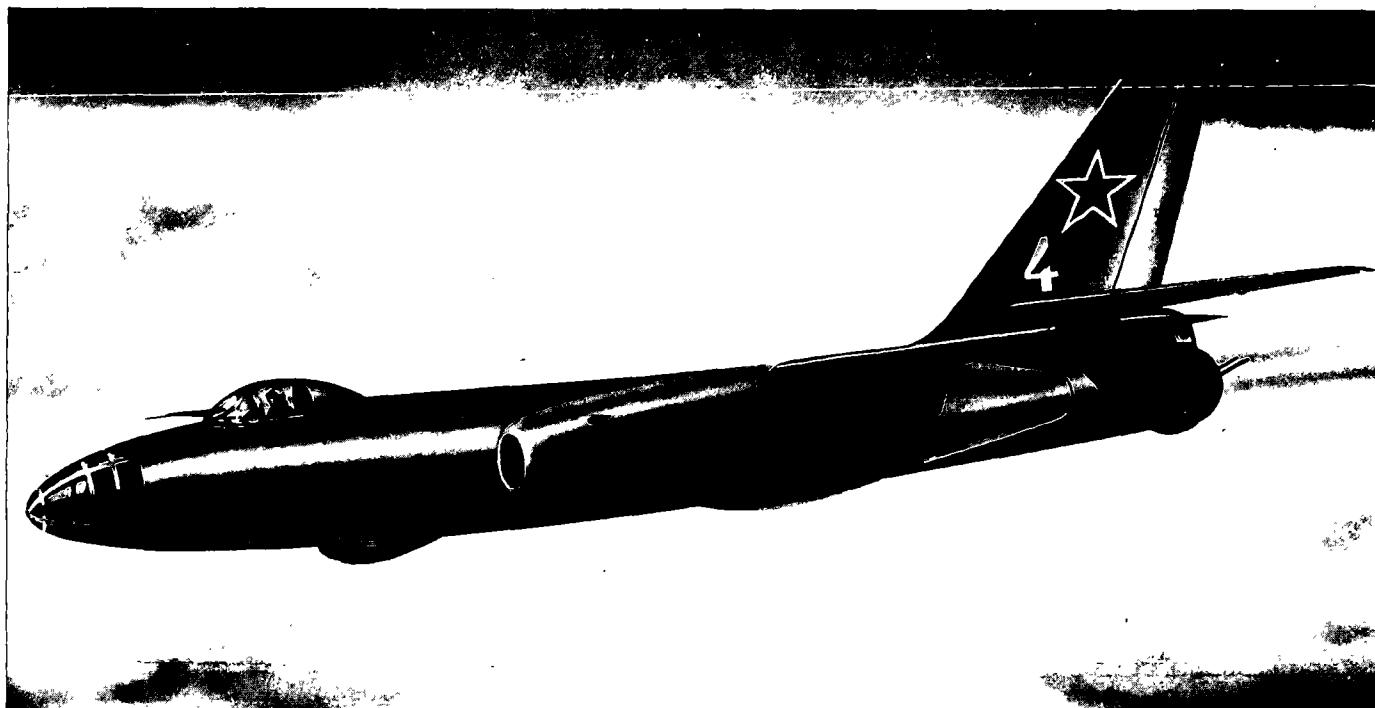
The Badger (TU-16) is a sweptwing, twin-jet medium bomber. It was first observed publicly at the Soviet 1954 May Day Show and appeared very graceful in flight. Two large, flush air intakes are on the sides of the Badger's fuselage, and the exhaust is discharged from the trailing edge of the wing aft of the wing roots. The sweptwing is midmounted, and a radome is located under the nose. In some views the Badger's tail resembles the Beagle's (Il-28); however, it is larger, since the Badger is a bigger aircraft. The Badger has been described as similar to the U.S. B-47. There are differences, though, in that the B-47 has four jets in pods and a thin shoulder-mounted sweptwing. The Soviet Camel (TU-104) civil airliner is derived from the Badger.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	TUPOLEV	Max. Range (Naut. Miles)	3,500 approx.	No. of Engines	2
Wing Span	115'	Crew No.	5-6	Model No.	
Length	120'	Max. Speed (Knots)	550 approx.	Mfr.	MIKULIN
Combat Weight (Lbs.)	150,000 approx.	Service Ceiling (Ft.)	45,000 approx.	Type	Turbojet
				Rating Each	19,000#

BADGER

TUPOLEV



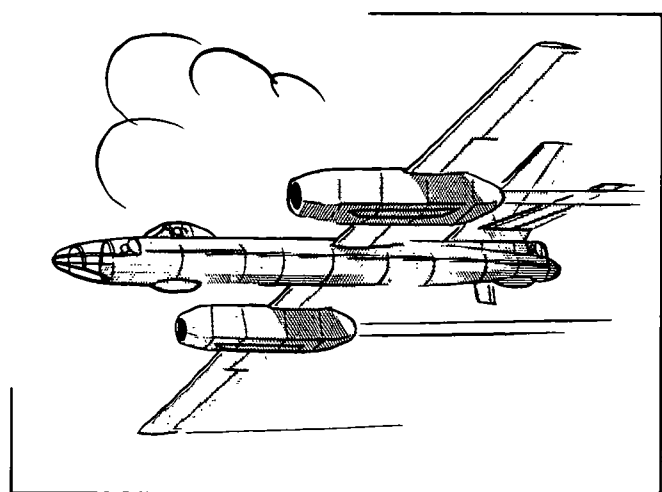


The Beagle (Il-28) is a light, twin-jet bomber designed by Ilyushin. Its fuselage is rounded, but it has an overall appearance of angularity. The wings have square tips and join the fuselage sharply without fairing. Straight lines are noticeable throughout the bomber; even the long, tapered engine nacelles have flat sides and a square look. Pronounced sweepback is a feature of the empennage. The high midwing, like the stabilizer, appears to have moderate dihedral. This all-metal jet bomber is the Soviet's counterpart of the English Canberra (U.S. B-57). The "Mascot" (UII-28) is a training version with a solid nose and an extra cockpit. The Beagle is in service with the satellite air forces and the Syrian, Egyptian, Afghan, and Indonesian air forces as well as with the Soviet Air Forces.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	ILYUSHIN	Max. Range (Naut. Miles)	1,200 approx.	No. of Engines	2
Wing Span	70'	Crew No.	3	Model No.	
Length	60'	Max. Speed (Knots)	475 approx.	Mfr.	KLIMOV
Combat Weight (Lbs.)	45,000 approx.	Service Ceiling (Ft.)	50,000 approx.	Type	Turbojet
				Rating Each	6,000#

BEAGLE

ILYUSHIN



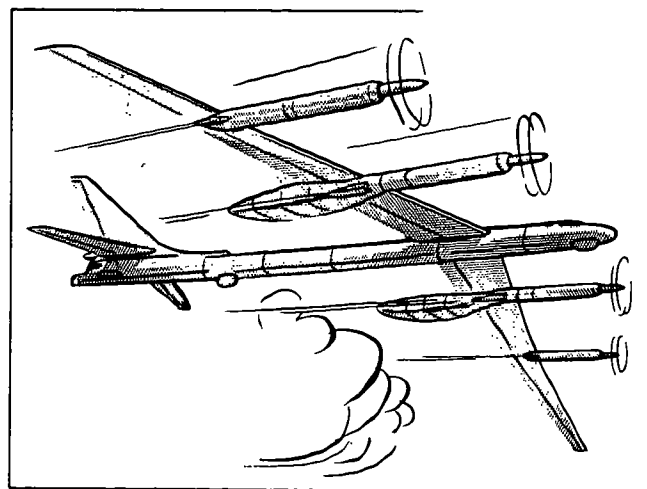
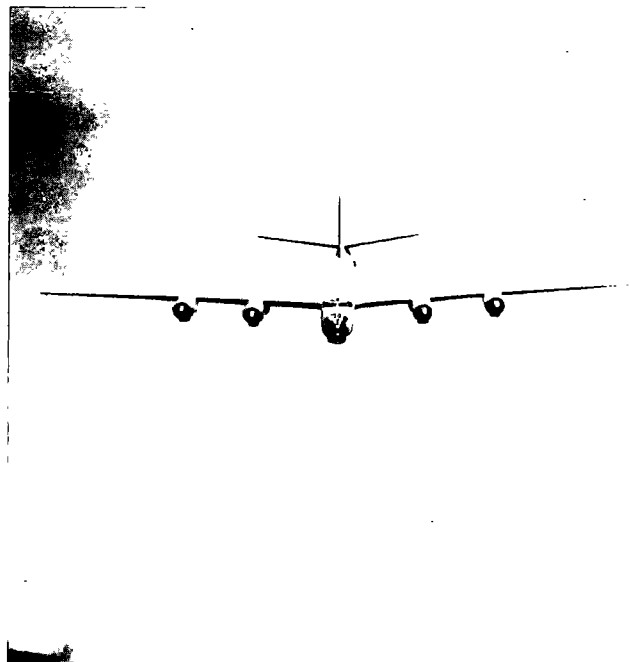
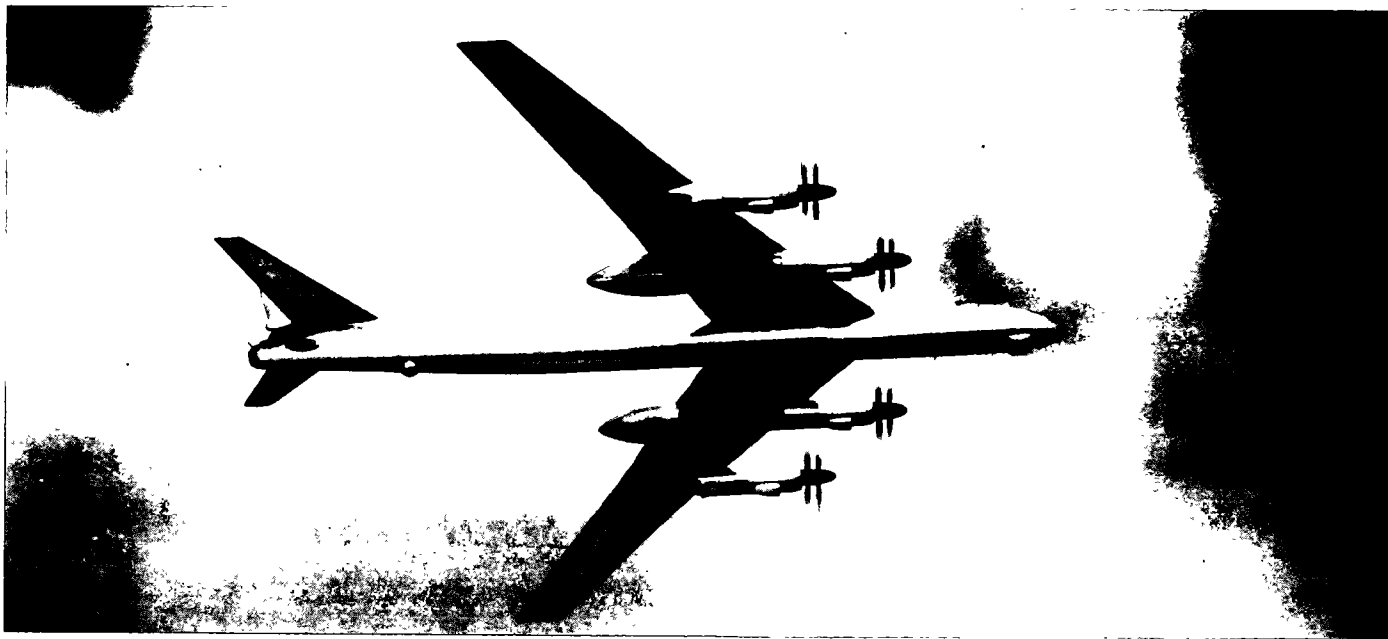


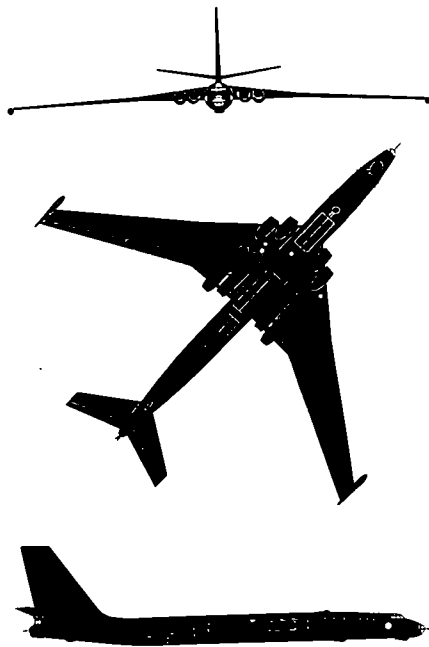
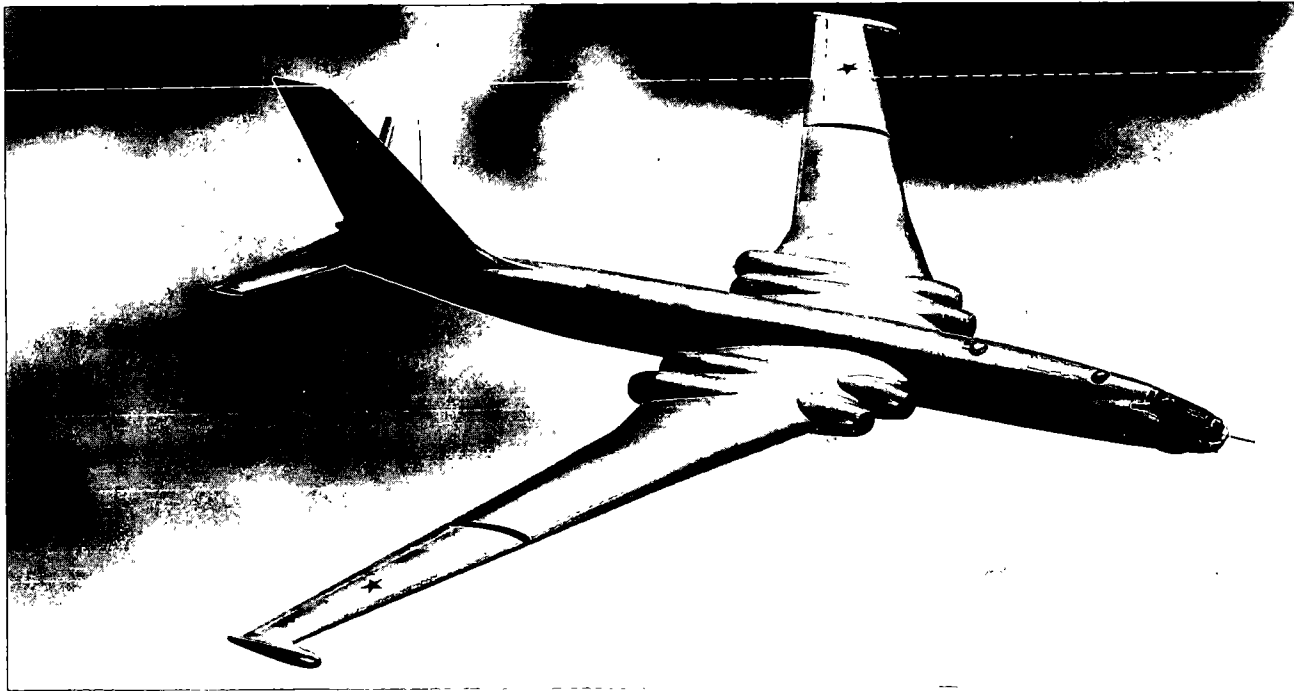
The Bear (TU-95) is a four-engined, sweptwing, long-range turboprop bomber. It first appeared in the May Day Show of 1955, and is the only turboprop-powered heavy bomber in the world. The fuselage of the Bear closely resembles that of the Badger (TU-16) as does the tail. The wing is also similar but mounts four turboprop engines with co-axial, contrarotating propellers. All of the engine nacelles protrude forward of the wing but only the inboard engines extend aft of the wing. The Bear has dorsal and ventral gun turrets in addition to a manned tail position. A radar scanner is fitted under the fuselage nose, and there are two blisters on the rear of the fuselage. The Cleat (TU-114), which is the largest commercial transport in the world, was probably derived from the Bear.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	TUPOLEV	Mox. Range (Naut. Miles)	8,000 approx.	No. of Engines	4
Wing Span	165'	Crew No.		Model No.	
Length	150'	Mox. Speed (Knots)	500 approx.	Mfr.	
Combat Weight (Lbs.)	300,000 approx.	Service Ceiling (Ft.)	45,000 approx.	Type	Turboprop
				Rating Each	12,000 s. hp. plus

BEAR

TUPOLEV



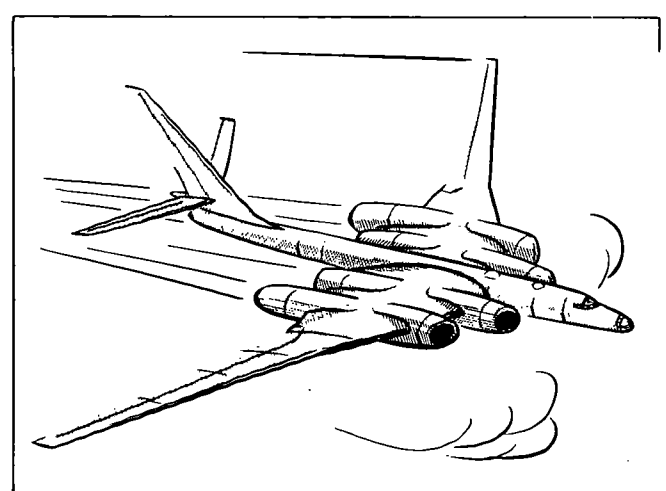
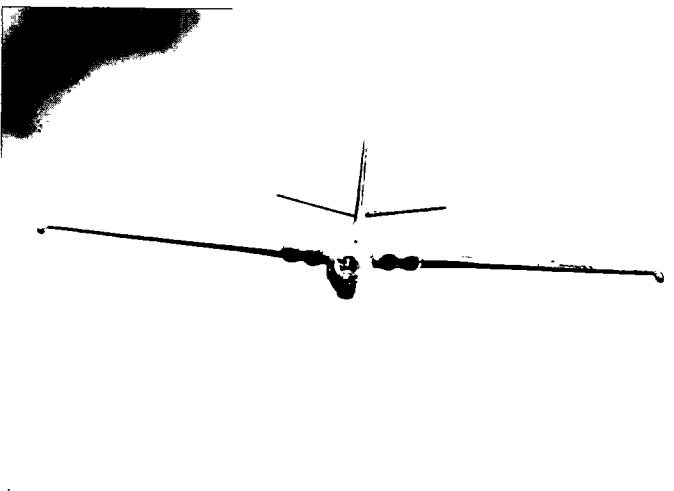
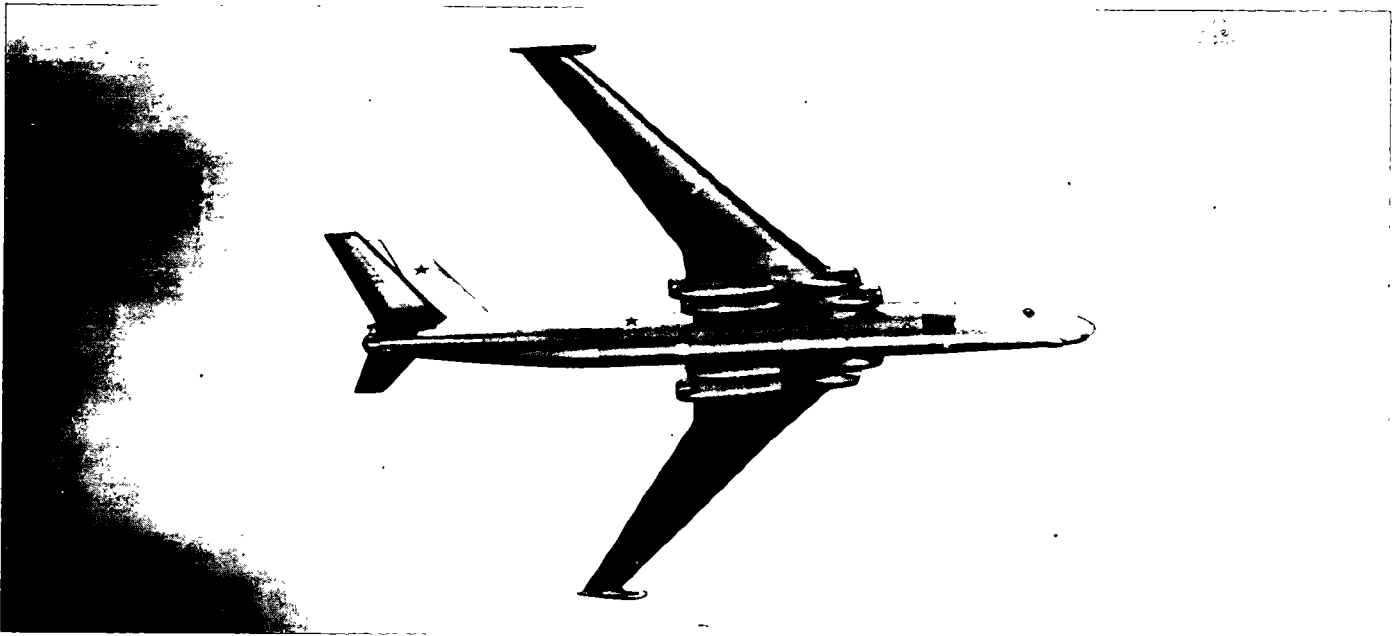


The Bison is a four-jet, swept-midwing, Soviet heavy bomber first seen on May Day 1954. The slim, pencil-shaped fuselage, with its forward underslung radome, side-sighting blisters, forward turrets, and tail turret, is a good recognition feature. The cockpit is topped by a transport-type canopy. The modified crescent wing contains four staggered buried engines in long, flattened cylinders located within the inboard wing sections. Small wing-tip pods cap the ends of the wing. Although its radar and fire-control equipment are believed not to be as advanced as those of modern western bombers, the Bison is still a formidable weapon because of its speed, range, and bomb-carrying capacity. Aerial-refueling versions have been seen during Aviation Day Shows.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.		Max. Range (Naut. Miles)	5,500 approx.	No. of Engines	4
Wing Span	170'	Crew No.		Model No.	
Length	155'	Max. Speed (Knots)	525 approx.	Mfr.	MIKULIN
Combat Weight (Lbs.)	400,000 approx.	Service Ceiling (Ft.)	45,000 plus	Type	Turbojet
				Rating Each	20,000 approx.

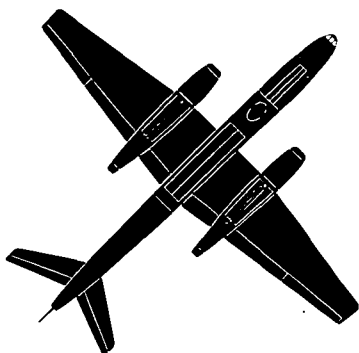
BISON

MYASISCHCHEV



TUPOLEV

BOSUN

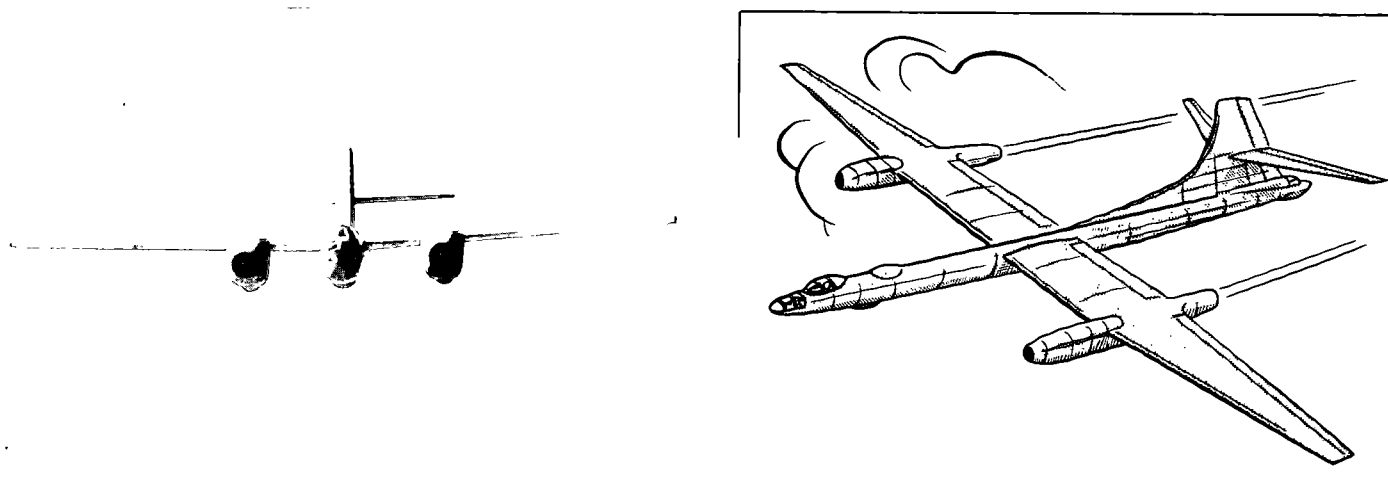
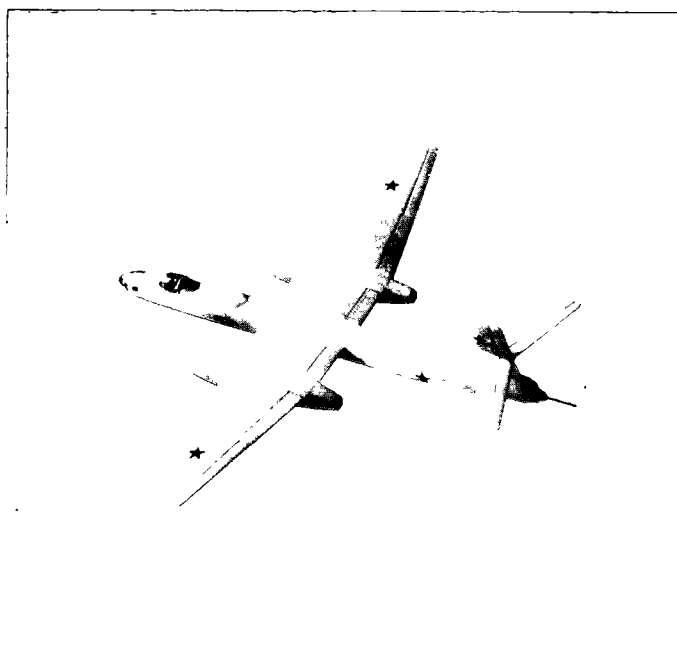
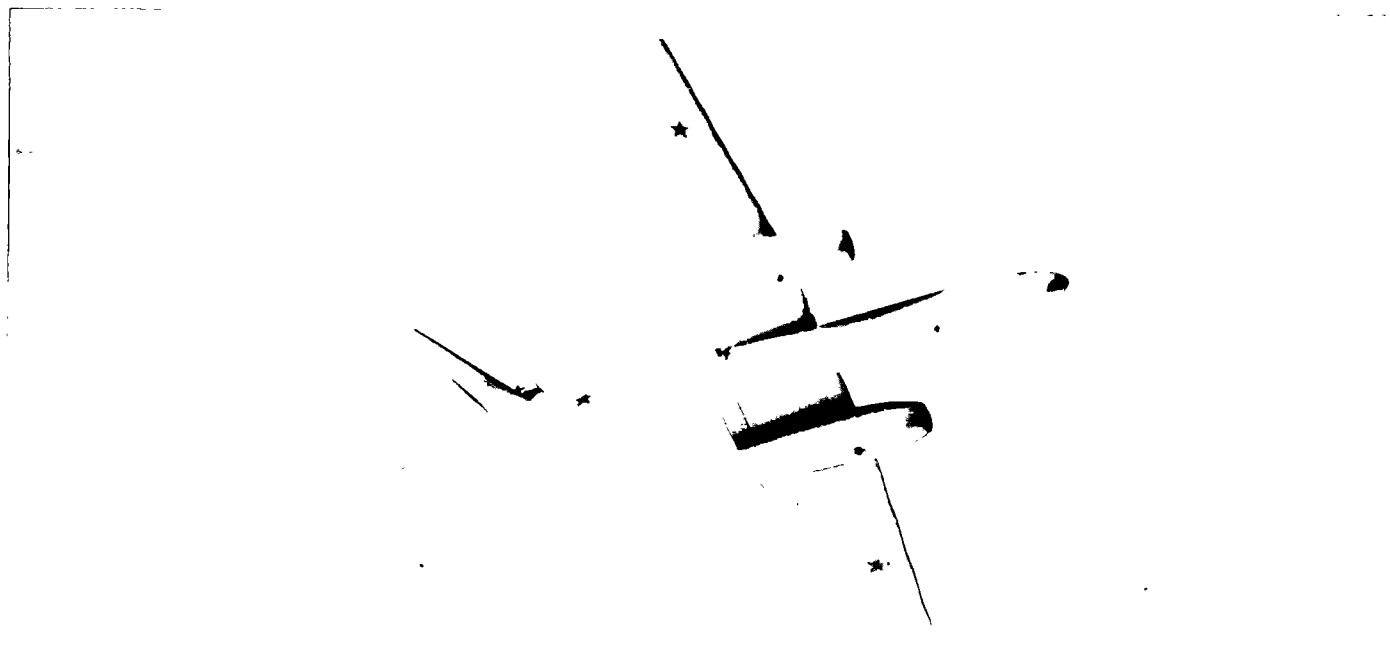


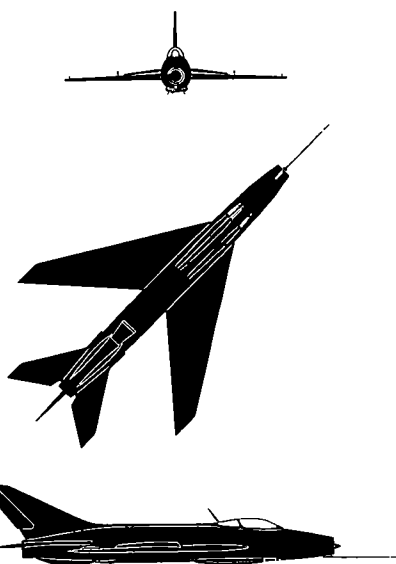
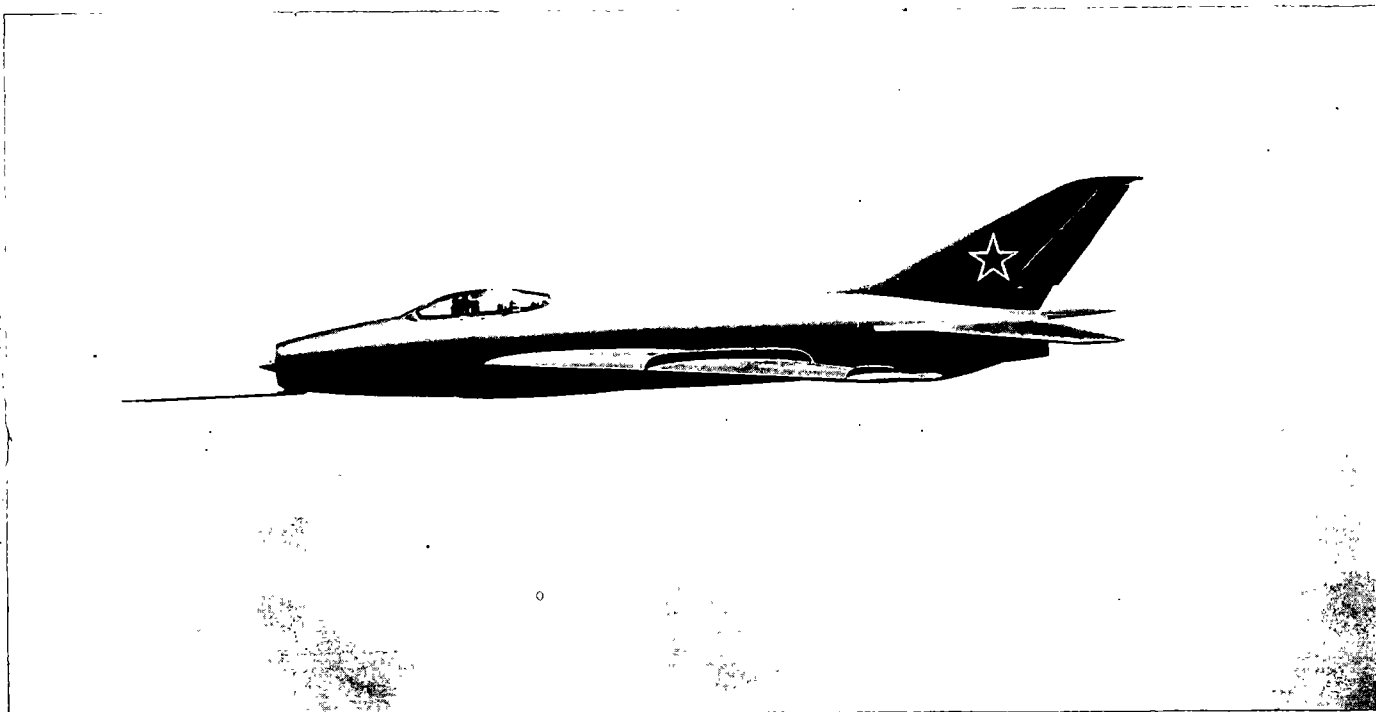
The Tupolev Bosun is a twin-jet bomber somewhat larger than the Beagle (Il-28). It was first observed during the 1951 Moscow Air Show. At that time the aircraft was painted grey, denoting Navy affiliation. The long, slender lines of the Bosun give this aircraft a sleeker appearance than the now-familiar twin-jet Beagle. In common with the latter, the Bosun combines a straight wing with a sweptback horizontal stabilizer. The shoulder-mounted wing is tapered along both edges outboard of the engines. The vertical stabilizer appears thick at the root due to the long dorsal fin at the leading edge and the tail gunner's compartment at the trailing edge. Apparently the Bosun's only armament is a tail turret.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	TUPOLEV	Max. Range (Naut. Miles)	1,500 approx.	No. of Engines	2
Wing Span	78'	Crew No.	3	Model No.	VK-1
Length	64'	Max. Speed (Knots)	470 approx.	Mfr.	KLIMOV
Combat Weight (Lbs.)	45,000 approx.	Service Ceiling (Ft.)	40,000 approx.	Type	Turbojet
				Rating Each	6,000#

BOSUN

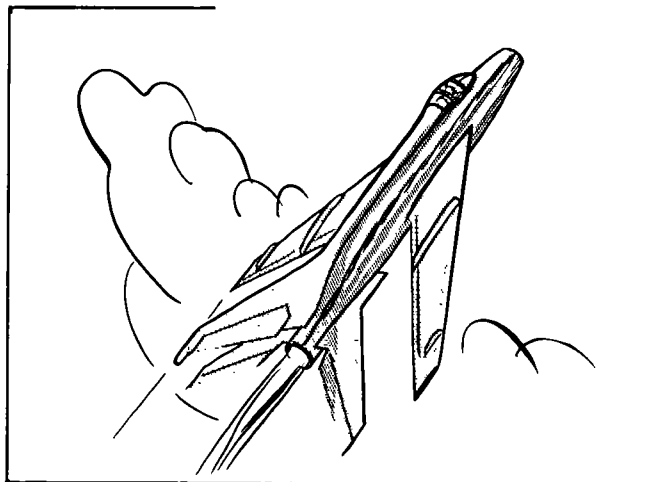
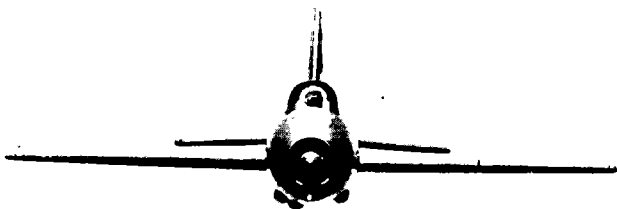
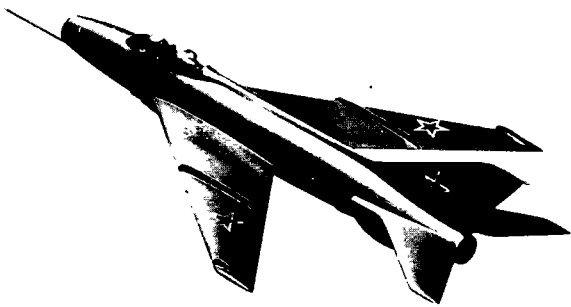
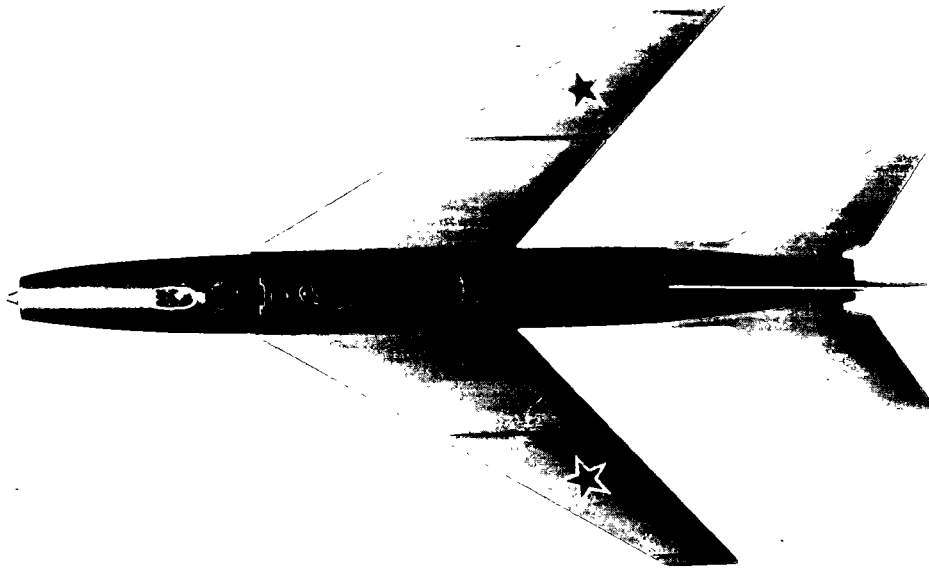
TUPOLEV

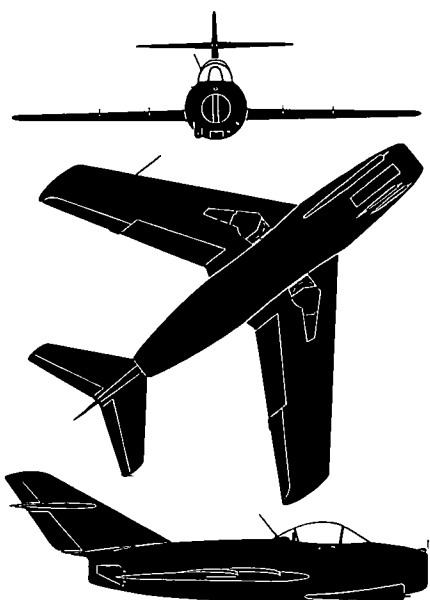
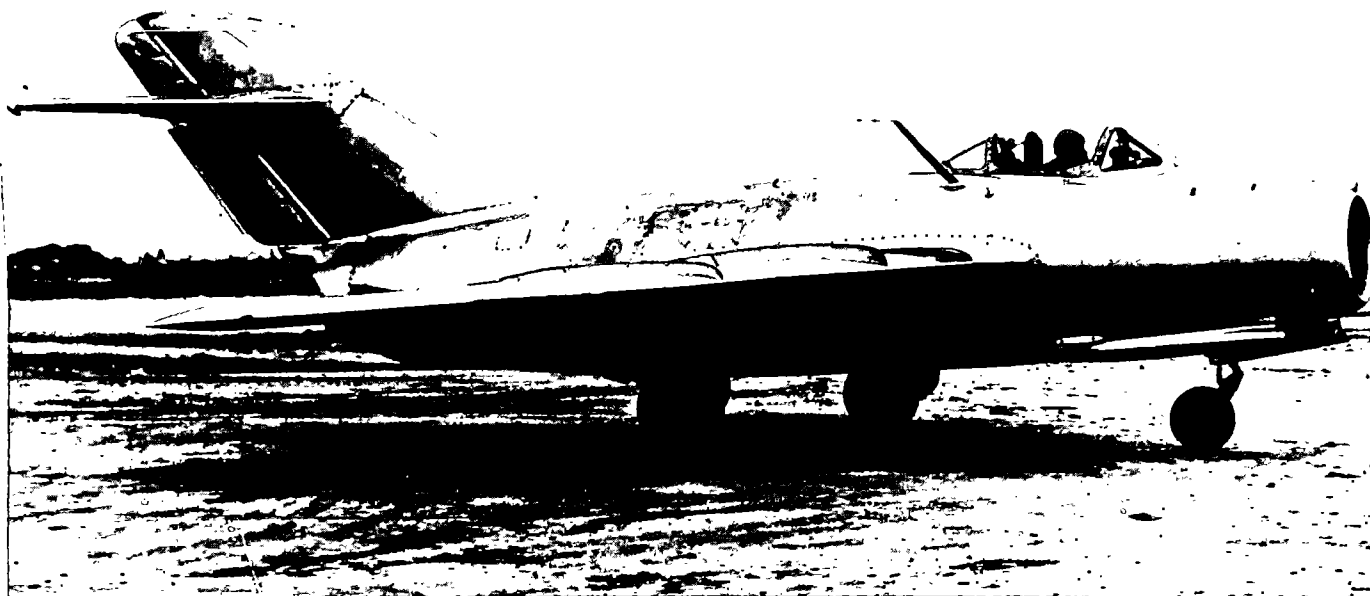




The Faceplate (MIG-21) is a single-jet swept-wing, supersonic fighter that was first displayed publicly in 1956. The sharply swept wings are low-midmounted and have squared-off tips. The swept-back horizontal stabilizer also has square tips. The fuselage, which appears long in relation to the wing length, is blunt in both front and rear. A fairing extends from the canopy to the fin. There is a noticeable bulge under the rear of the fuselage, and two fin fairings are located under the tailpipe. A tricycle landing gear is fitted. Armament is believed to consist of three 37-mm cannon and a number of 50-mm air-to-air rockets in underwing pods.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	MIKOYAN, GUREVICH	Max. Range (Naut. Miles)	1,200 approx.	No. of Engines	1
Wing Span	28' approx.	Crew No.	1	Model No.	
Length	40' approx.	Max. Speed (Knots)	Mach 1 plus	Mfr.	
Combat Weight (Lbs.)	12,000 approx.	Service Ceiling (Ft.)	60,000 approx.	Type	Turbojet
				Rating Each	12,000# plus



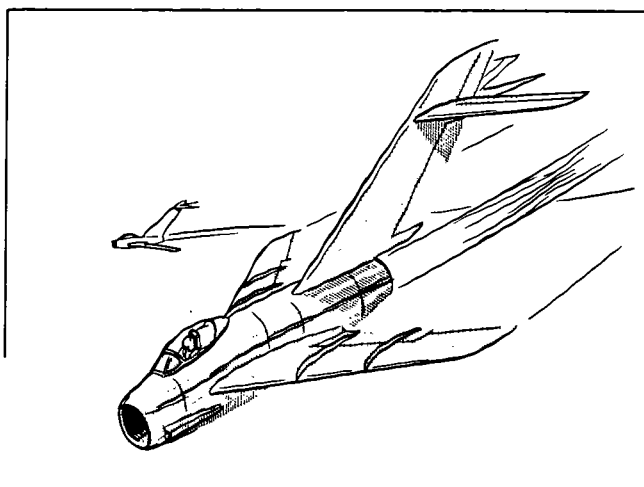
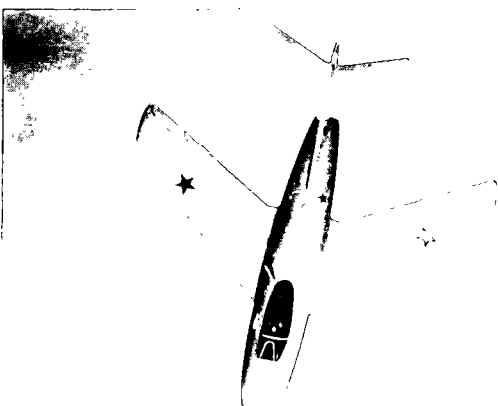
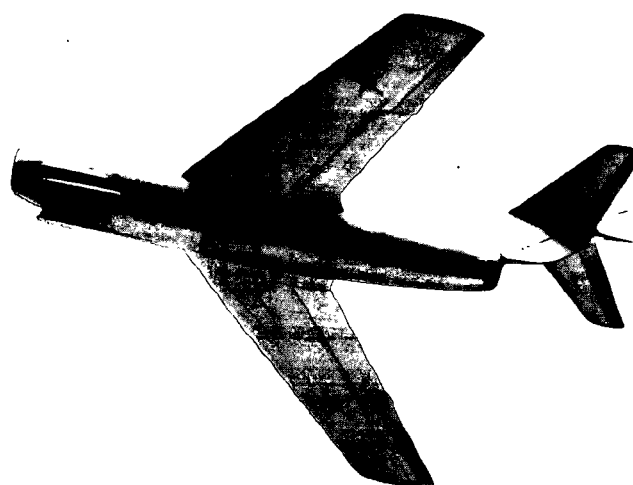
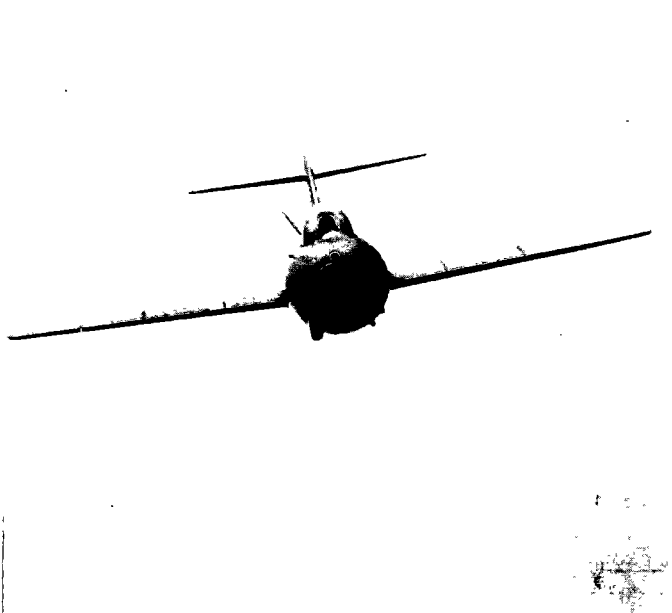
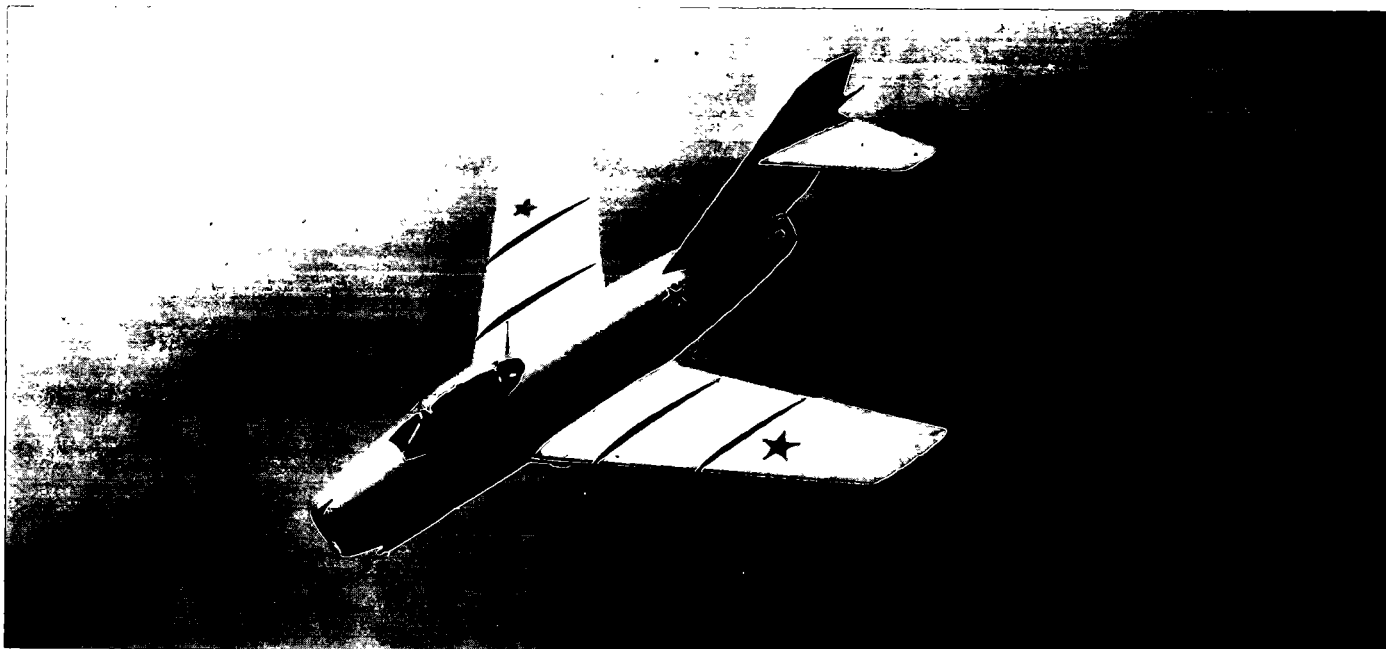


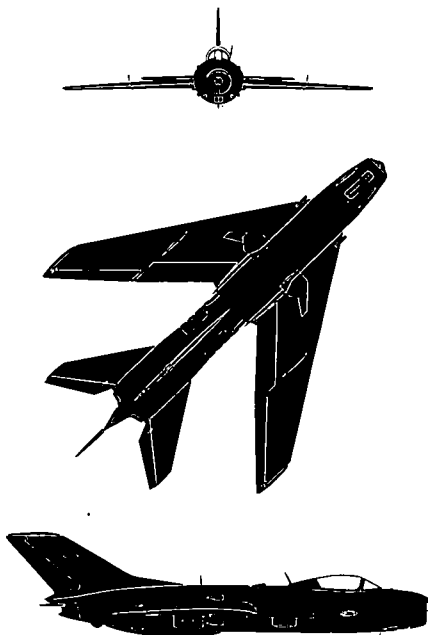
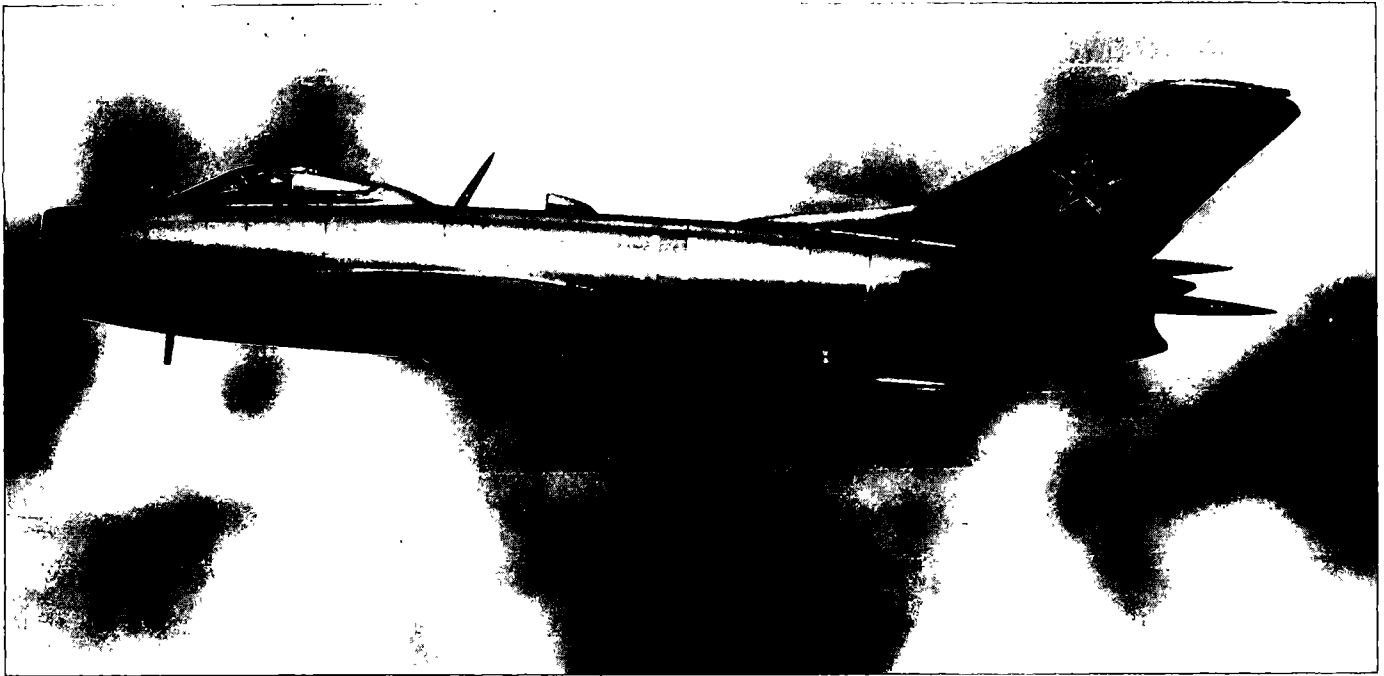
The Fagot (MIG-15) is a single-seat, single-jet fighter. It was encountered in Korea by U.N. jet pilots and their ensuing engagements constituted history's first record of jet-against-jet aerial warfare. Design of this first-line fighter is attributed to the Mikoyan-Gurevich team. The MIG-15 has a single centrifugal-flow turbojet engine installed in the afterhalf of its fuselage. Wings and horizontal and vertical tail surfaces—all have pronounced sweepback and blunt tips. The angle of the wings' sweepback is around 35°, approximately the same as that of the F-86. Resembling the F-86 in layout, the MIG-15's wings, however, are midmounted while the F-86 has low-mounted wings. Another difference is the MIG-15's highmounted horizontal stabilizer on its broad fin and rudder. The Midget is a 2-seat trainer version of the MIG-15 with a longer cockpit canopy. The Fagot is in service with Sino-Soviet-Satellite air forces as well as Syrian Egyptian Air Force. Armament consists of one 37-mm and two 23-mm guns.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	MIKOYAN, GUREVICH	Max. Range (Naut.Miles)	430 approx.	Na. of Engines	1
Wing Span	33'1"	Crew No.	1	Model No.	VK-1
Length	33'5"	Max. Speed (Knots)	575 S/L approx.	Mfr.	V. KLIMOV
Combat Weight (Lbs.)	10,000 approx.	Service Ceiling (Ft.)	50,000 plus	Type	Turbojet
				Rating Each	5,500# to 6,000#

FAGOT

MIKOYAN-GUREVICH



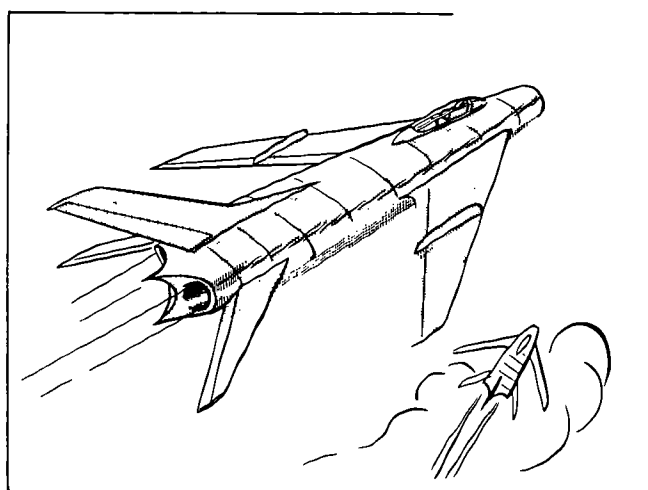
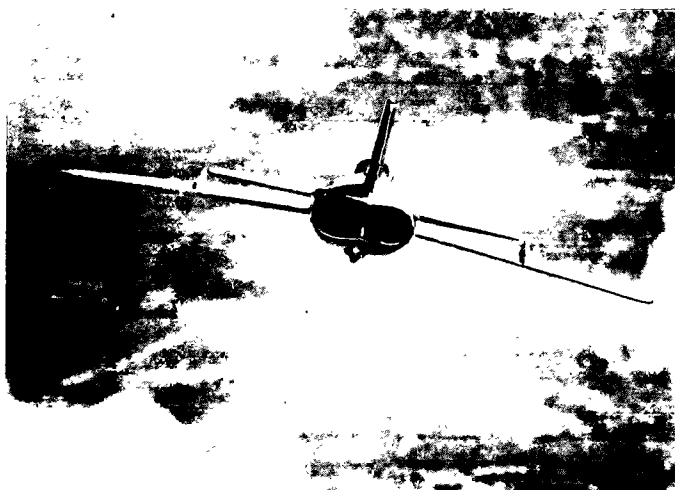
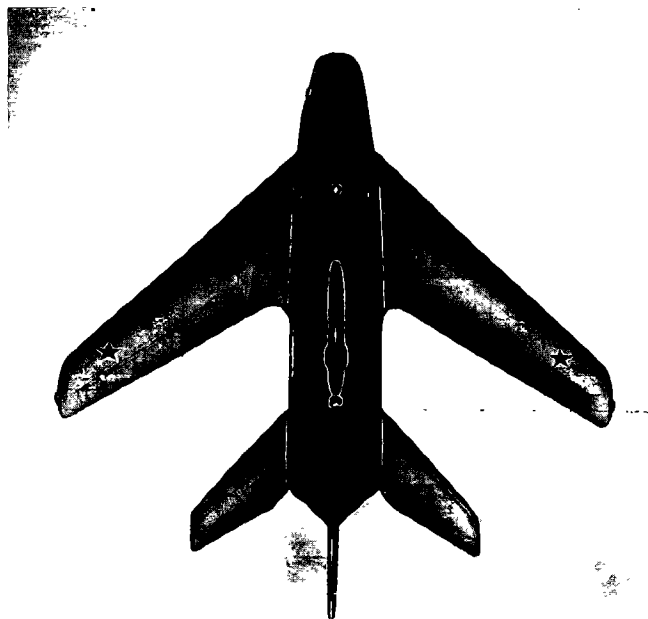
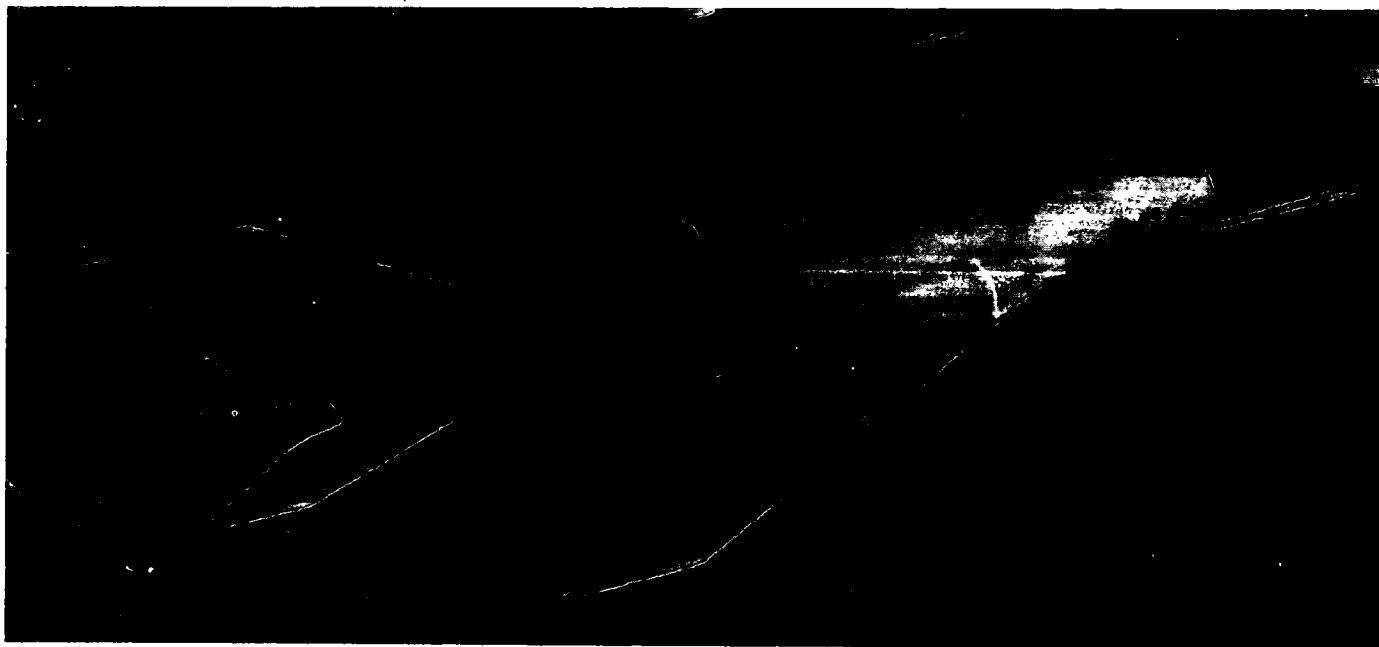


The Farmer (MIG-19) is a single-seat, midwing, twin-jet fighter. It was first seen publicly as part of a Soviet Aviation Day Display in 1955. The Farmer's wings and slab-shaped tail surfaces are swept-back more than 40 degrees. The short fuselage is flat on both top and bottom. Close-up recognition features include the oblate nose air inlet, wing fences, empennage overhanging the tailpipe exhaust, and the fuselage-mounted horizontal stabilizer. The overall appearance of the Farmer is that of a "swept" airplane whose fuselage has been run between rollers for flattening. The Farmer is able to exceed the speed of sound in level flight. At present it is in large-scale service with the Soviet Air Force. It is also being built in Czechoslovakia. Armament consists of two 23-mm guns.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	MIKOYAN, GUREVICH	Max. Range (Naut.Miles)	1,400 approx.	Na. of Engines	2
Wing Span	32' approx.	Crew No.	1	Model No.	
Length	42' approx.	Max. Speed (Knots)	675 S/L plus	Mfr.	
Combat Weight (Lbs.)	15,000 approx.	Service Ceiling (Ft.)	60,000 approx.	Type	Turbojet
				Rating Each	Approx. 6,500# each

FARMER

MIKOYAN-GUREVICH

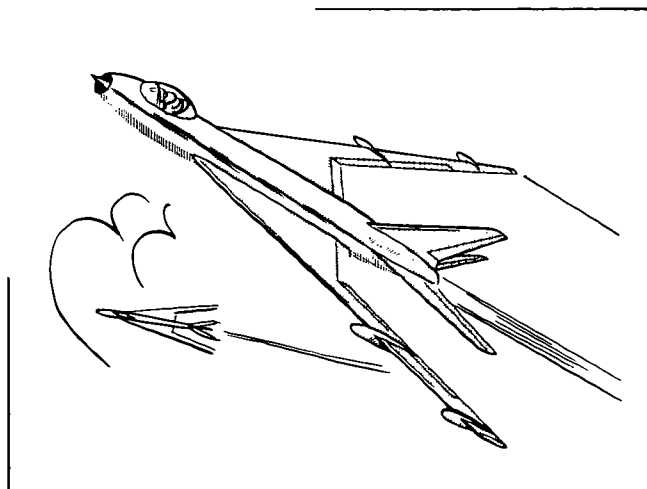


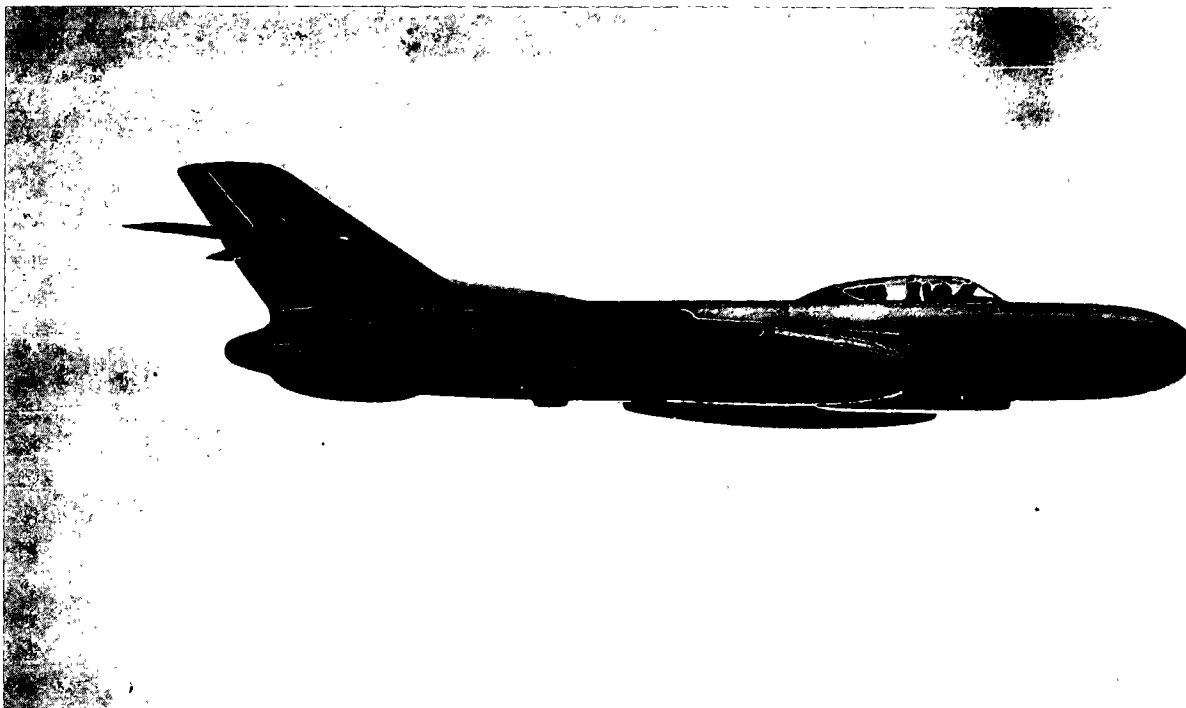


The Fitter is a sweptwing, single-jet day-fighter that was first exhibited at Tushino in 1956. Its extremely long fuselage is blunt, both in the front and rear. The wings are low-midmounted and are sharply swept except for the broad-chord wing roots at the trailing edge. All tail surfaces are swept back and the horizontal stabilizer is midmounted on the fuselage. A tricycle landing gear is fitted. In overall appearance the Fitter bears a resemblance to both the Farmer and the Faceplate, and its fuselage is almost identical with that of the Fishbed which may identify it as a Sukhoi design. The Fitter may serve as a replacement for the Farmer.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.		Max. Range (Naut.Miles)	1,000 approx.	No. of Engines	1
Wing Span	25' approx.	Crew No.	1	Model No.	
Length	40' approx.	Max. Speed (Knots)	Mach 2 plus	Mfr.	
Combat Weight (Lbs.)	14,000 approx.	Service Ceiling (Ft.)	60,000 approx.	Type	Turbojet
				Rating Each	14,000# plus

FITTER



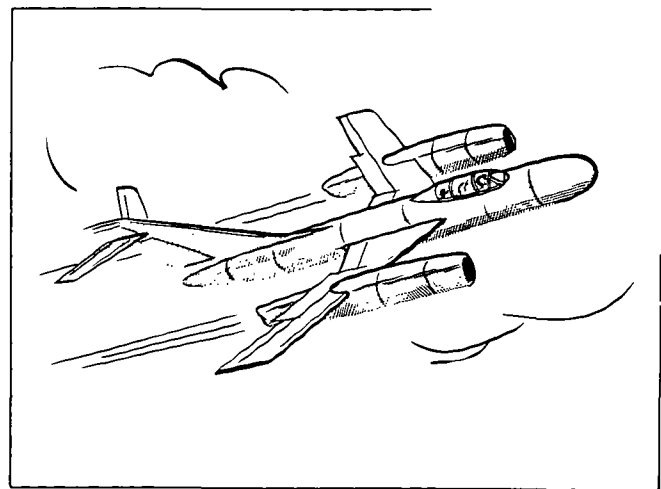


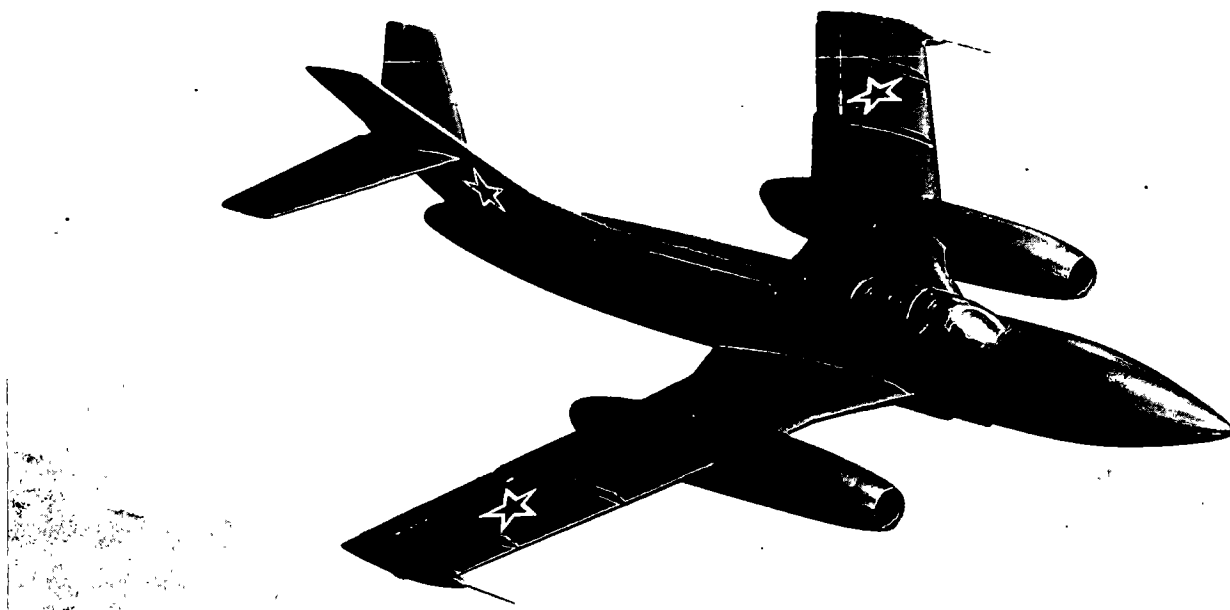
The Flashlight A (YAK-25) is a two-place, midwing, twin-jet all-weather Soviet fighter. This sweptwing jet with a torpedo-shaped fuselage was first seen at Tushino in 1955. Recognition features include a horizontal stabilizer located high on the vertical fin; a large, blunt, rounded nose extending well forward of the wing root; a fin-like protrusion on the underside of the aft fuselage; two underslung turbojets which stick a long way out in front of the wings and a little way behind; two wingtip pods with booms extending forward on each; and wing fences on each wing. The Flashlight is similar in appearance to the French Vautour. Armament consists of two 37-mm guns.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	YAKOVLEV	Max. Range (Naut Miles)	1,000 approx.	No. of Engines	2
Wing Span	36'	Crew No.	2	Model No.	
Length	50'	Max. Speed (Knots)	600 S/L plus	Mfr.	
Combat Weight (Lbs.)	18,000 approx.	Service Ceiling (Ft.)	50,000 approx.	Type	Turbojet
				Rating Each	Approx. 5,000# each

FLASHLIGHT A

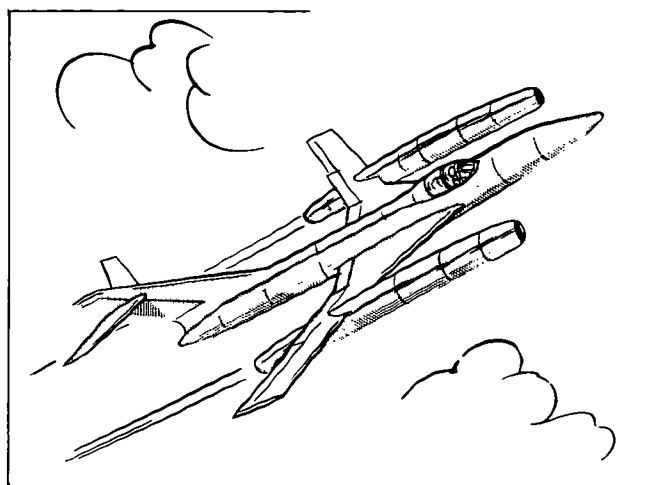
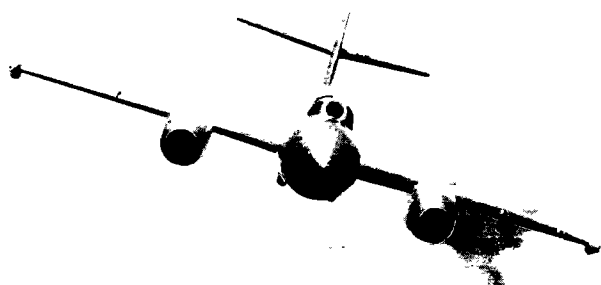
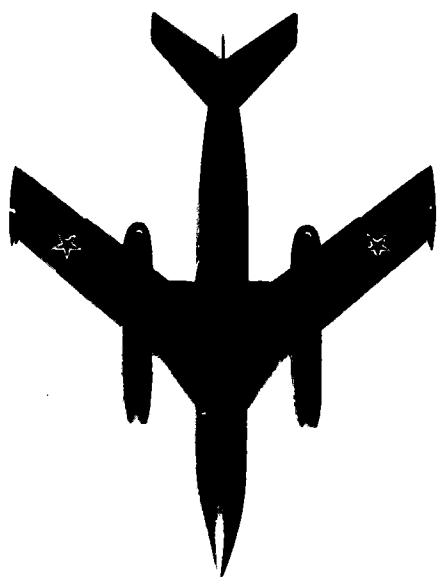
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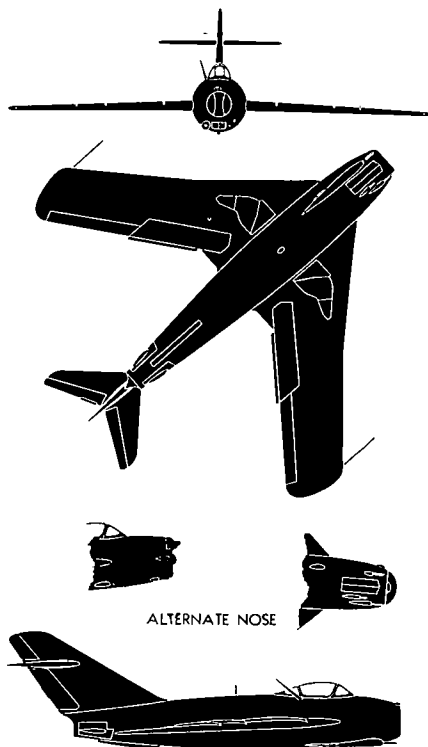
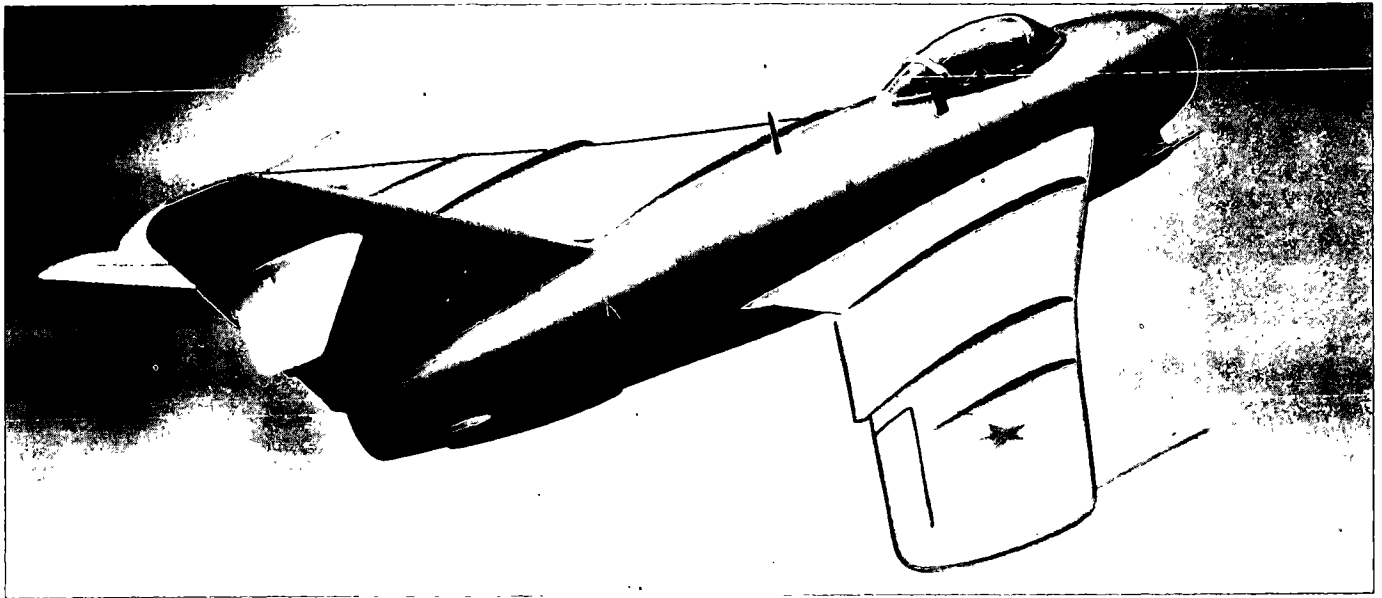




The Flashlight B and Flashlight C are both modified versions of the Flashlight A (YAK-25). From a recognition standpoint the C is identical to the A except that it has an extremely pointed nose, whereas A has a blunt nose. The Flashlight B differs from the A in that it has a pointed, transparent nose. In addition, the cockpit of the B carries only a single occupant. No external gun fairings are visible on the B and it is thought to be a light bomber. The C has a dorsal spine and its turbojets are fitted with afterburners.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	YAKOVLEV	Max. Range (Naut. Miles)		No. of Engines	2
Wing Span	36' approx.	Crew No.	1-2	Model No.	
Length	54' approx.	Max. Speed (Knots)	625 S/L plus	Mfr.	
Combat Weight (Lbs.)	20,000 approx.	Service Ceiling (Ft.)	50,000 approx.	Type	Turbojet
				Rating Each	6,000# plus



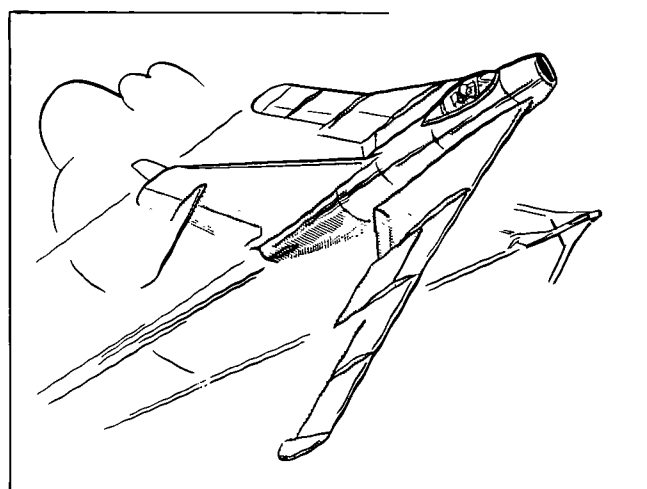
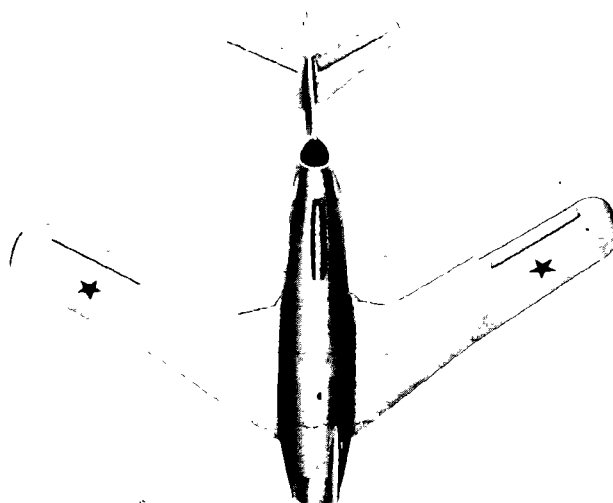


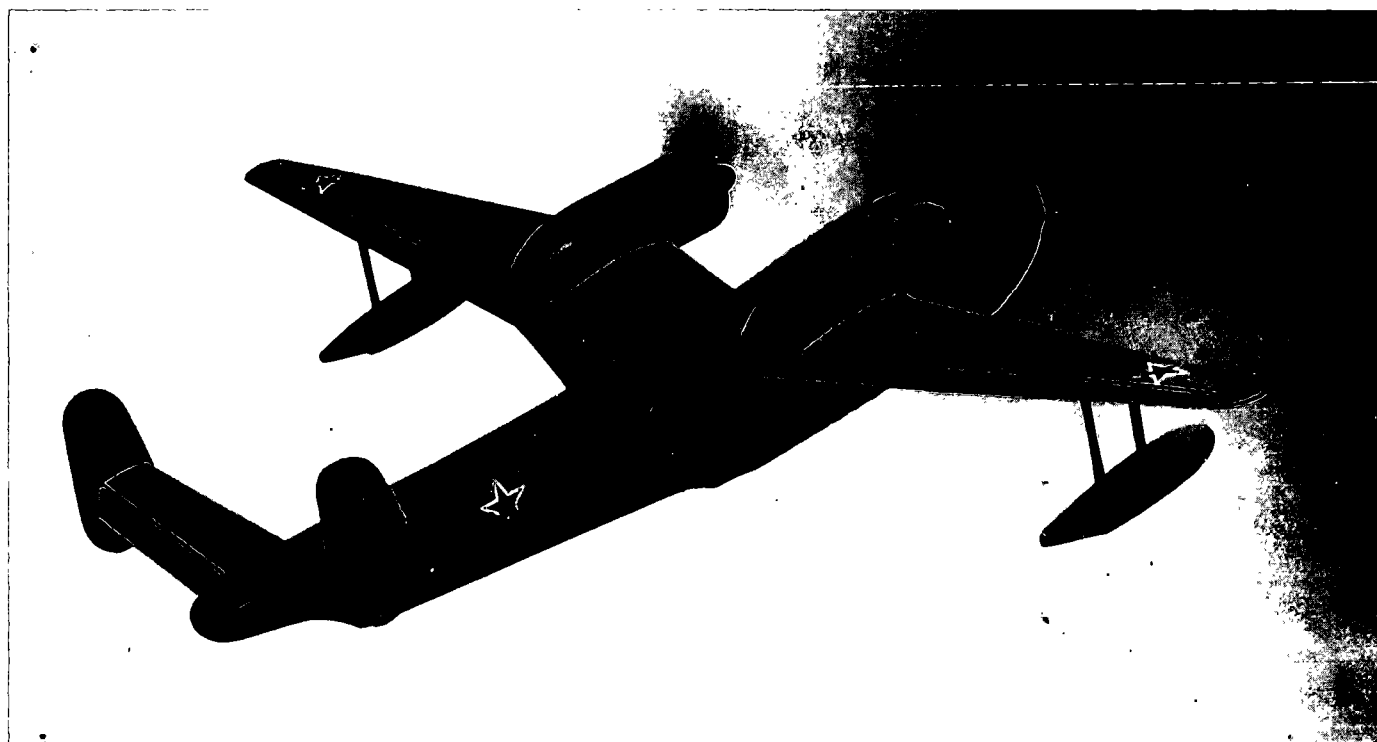
The Fresco (MIG-17) is an improved successor to the Fagot (MIG-15) and has been seen in fly-bys over Moscow during Soviet air shows. There are four versions of this aircraft. Points of difference include a fuselage tail when an afterburner is used, and a radar equipped nose-section. Patterned after the Fagot, this new aircraft appears to have greater sweepback to its wings and to be more slender and tapered than its predecessor. The cockpit is mounted well forward, and blunt-tipped sweptback wings are midmounted. The prominent fin and rudder resemble the sweptback tail of the Fagot, but the smooth line from the rudder's trailing edge to the jet exhaust is noticeably different from the Fagot's prominent step-back rudder. A keel-like bulge is evident on the underside of the afterend of the fuselage. One version of the Fresco, the Fresco D, is a radar-equipped, all-weather fighter with a slight nose modification. The Fresco is in service with Sino-Soviet-Satellite air forces, as well as Syrian/Egyptian, Afghan, and Indonesian air forces. Armament consists of one 37mm and two 23mm guns.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	MIKOYAN, GUREVICH	Max. Range (Naut. Miles)	1,100 plus with extra fuel	No. of Engines	1
Wing Span	32'	Crew No.	1	Model No.	VK-1
Length	36'	Max. Speed (Knots)	625 S/L plus	Mfr.	KLIMOV
Combat Weight (Lbs.)	12,000 approx.	Service Ceiling (Ft.)	55,000 plus	Type	Turbojet
				Rating Each	Approx. 8,000# with A.B.

FRESCO

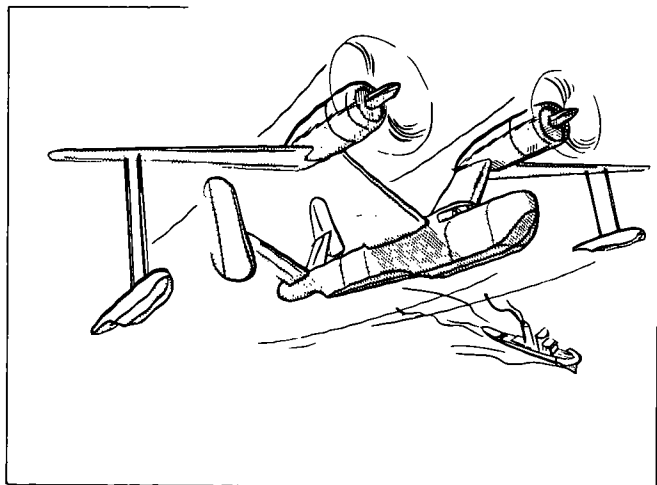
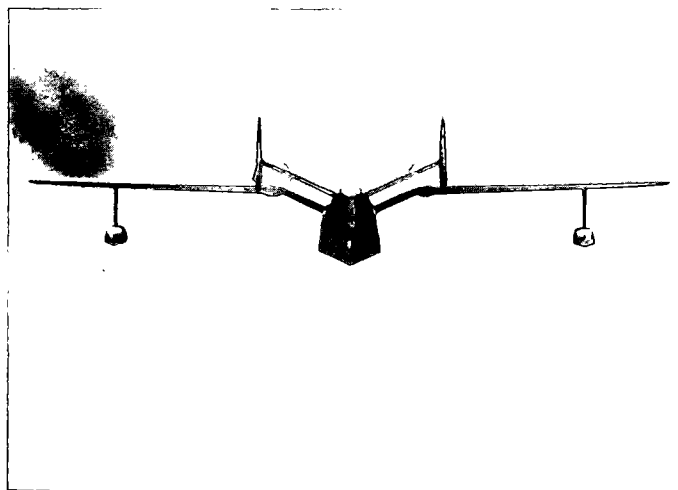
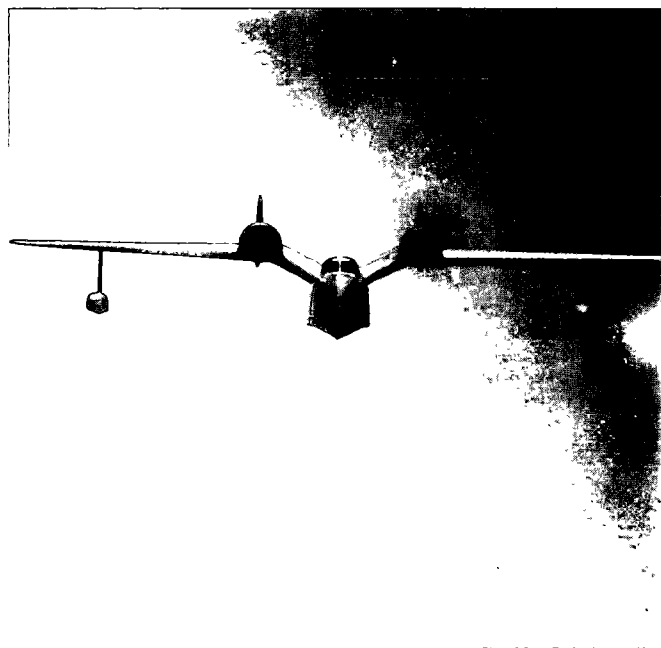
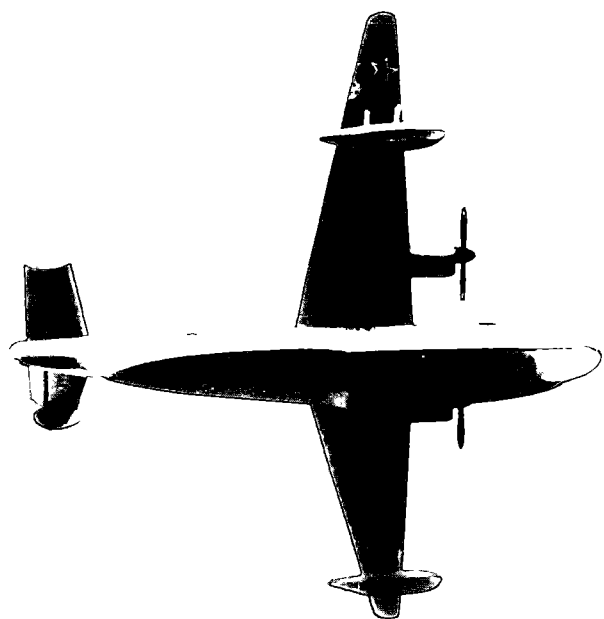
MIKOYAN-GUREVICH



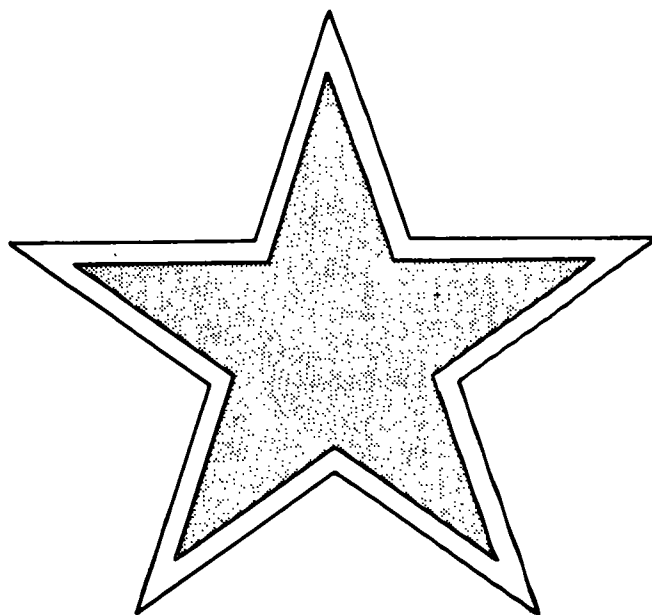


The Madge (BE-6) is a twin-engined flying-boat. It is used both for reconnaissance and ASW work and appears similar in configuration to the Martin Mariner. Recognition features include the tapered, gull-type wings; the horizontal tailplane with positive dihedral and twin fins and rudders; and the float suspended from near each wingtip. The large engine nacelles are mounted at the crests of the gull-wing and extend well out in front of the wing's leading edge. A crew of 8 is carried. The Madge has been in service with Soviet Air Force and Naval Aviation since 1951.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	BERIEV	Max. Range (Naut. Miles)	1,700 approx.	No. of Engines	2
Wing Span	110'	Crew Na.	6	Model Na.	
Length	78'	Max. Speed (Knots)	160 plus	Mfr.	ASH
Combat Weight (Lbs.)	50,000 approx.	Service Ceiling (Ft.)	20,000 approx.	Type	Piston
				Rating Each	Approx. 2,000 hp. each



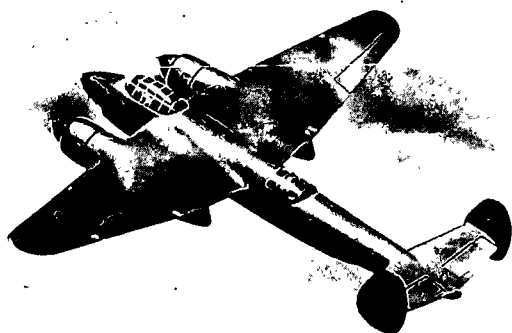
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AIRCRAFT



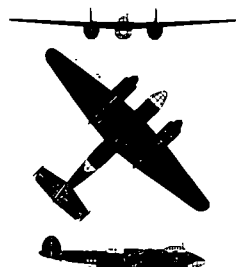
OTHER

TUPOLEV

BAT



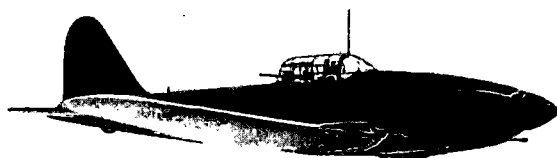
Mfr.	TUPOLEV	Max. Speed (Knots)	275
Wing Span	62'	Service Ceiling (Ft.)	29,000
Length	45'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	24,000	Model No.	Ash-82 FNV
Max. Range (Naut. Miles)	1,000	Mfr.	ASH
Crew No.	3-4	Rating Each	1,825 hp. each



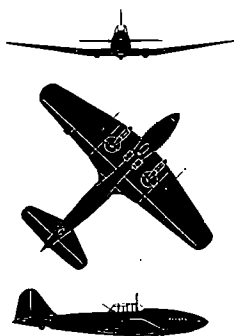
The Bat (TU-2) is a twin-engine, high-shoulder-wing bomber and attack monoplane. The engines are underslung in long, slender nacelles, with an air scoop prominent on top of each engine. A large propeller spinner is fitted. The fuselage has a deep, oval shape and a pointed nose and tail, and appears very slender. There is pronounced dihedral in the stabilizer, and the twin fins and rudders are egg-shaped. A gunner's position is located on the dorsal side of the fuselage behind the wing and on the ventral side forward of the stabilizer. Normal bomb load is approximately 3,080 lbs. Additional armament consists of two 20-mm guns fixed in the wing roots. The Bat is no longer in service with the Soviet Air Forces. However, some are still used in Sino-Soviet satellite air forces. In addition, Indonesia has received a number of Bats.

BEAST

ILYUSHIN



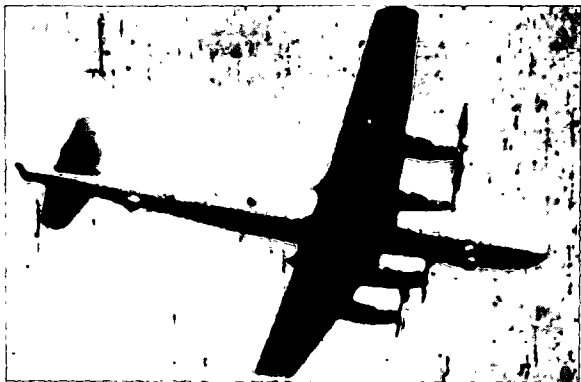
Mfr.	ILYUSHIN	Max. Speed (Knots)	273
Wing Span	44'	Service Ceiling (Ft.)	24,000
Length	36'8"	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	14,000	Model No.	Am-42
Max. Range (Naut. Miles)	360	Mfr.	AM
Crew No.	2	Rating Each	1,975 hp.



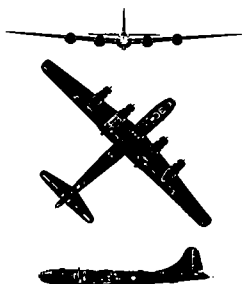
The Beast (IL-10) is a two-place, close support and reconnaissance monoplane. The low mounted wing has a positive dihedral in the outer panels and fillets at the root of the trailing edge. The fuselage-mounted horizontal stabilizer has a shape similar to the wing. The cockpit is set well forward on the fuselage. Soviet designers have been very conscious of the requirements of their ground support units, and early in World War II brought into being the famous Bark (IL-2 Stormovik) "tank buster." In 1944 a heavier (14,000 lbs) and more powerful development, the Beast, appeared as a replacement for the Bark. The engine cowlings on both these aircraft are composed of steel plates 6- to 8-mm in thickness. While both aircraft are similar in appearance, the Beast has a redesigned wing with a slightly sweptback leading edge. Both aircraft are equipped with tail-wheel type retractable landing gear. The Beast forms the backbone of air ground support in the Soviet and Satellite air forces. In Korea it was encountered occasionally, and a number were destroyed.

TUPOLEV

BULL



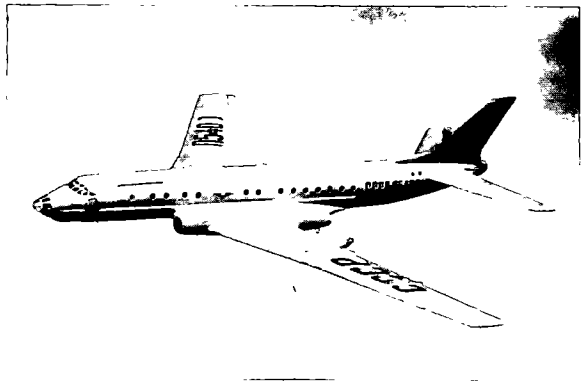
Mfr.	TUPOLEV	Max. Speed (Knots)	260 S/L
Wing Span	140'	Service Ceiling (Ft.)	40,000 approx.
Length	99'	No. & Type of Engines	4 Piston
Combat Weight (Lbs.)	140,000	Model No.	Ash-90
Max. Range (Naut. Miles)	3,000	Mfr.	ASH
Crew No.	11	Rating Each	2,000 hp. approx.



The Soviet Bull (TU-4) is a four-engine, midwing bomber. It is a copy of the U.S. B-29 Superfortress, several of which were confiscated by the Soviets after being forced to land in Soviet-occupied territory before the end of World War II. From the captured B-29's the Soviets also produced a few 72-seat pressurized passenger transports, designated the Cart (TU-70). The redesign of the B-29 was by the versatile Andrei Tupolev, the co-founder of the U.S.S.R.'s aviation industry. This aircraft is being replaced by more modern, long-range, turbojet, sweptwing bombers.

CAMEL

TUPOLEV



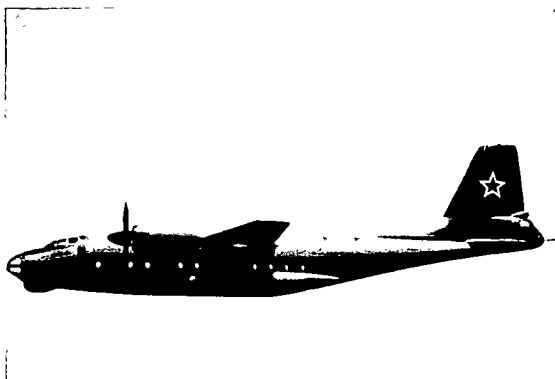
Mfr.	TUPOLEV	Max. Speed (Knots)	580 S/L
Wing Span	115'	Service Ceiling (Ft.)	40,000 approx.
Length	125'	No. & Type of Engines	2 Turbojet
Combat Weight (Lbs.)	125,000	Model No.	AM-3
Max. Range (Naut. Miles)	2,000	Mfr.	MIKULIN
Crew No.	5-7	Rating Each	20,000# approx.



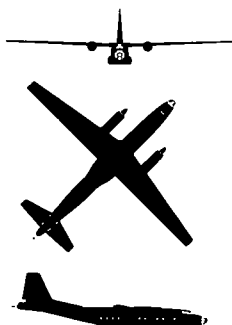
The Camel (TU-104) is a twin-jet Soviet airliner. It is a passenger-carrying version of the Badger medium bomber, and differs from the Badger mainly in its bulkier fuselage. Other differences include the Camel's low-set wings, and the horizontal tailplane mounted on the fuselage rather than on the fin as is the Badger's. In addition, the Camel's two jets are not as close to the fuselage as are the Badger's. The Camel can accommodate from 50 to 80 passengers. It has reportedly averaged 565 m.p.h. during a 1,200-mile flight while carrying a 4,400-lb load. The Camel was first seen by Western observers at a Soviet Aviation Display in 1955. There is a TU-104B version with a lengthened fuselage.

ANTONOV

CAMP



Mfr.	ANTONOV	Max. Speed (Knots)	350 approx.
Wing Span	125'	Service Ceiling (Ft.)	40,000 approx.
Length	103'	No. & Type of Engines	2 Turboprop
Combat Weight (Lbs.)	50,000 approx.	Model No.	
Max. Range (Naut. Miles)	1,200 approx.	Mfr.	
Crew No.	5	Rating Each	4,000 s. hp. approx.



The Camp (AN-8) is a twin-engined, high-wing assault-freight transport with a rear ramp entrance. It was first seen publicly in prototype form in 1956.. Recognition features include long, slender engine nacelles which protrude well forward of the wing's leading edge; the upswept aftersection of the fuselage; a large, vertical tail with a manned gun position beneath the rudder; a transparent nose; and a radar blister under the nose. The Camp carries a crew of 5 and can accommodate 60 fully armed troops. Large-wheeled items can be accommodated through the rear ramps. Aircraft such as the Camp will be used extensively as a freight transport to areas where rail or other forms of transportation are poor.

ANTONOV

CAT



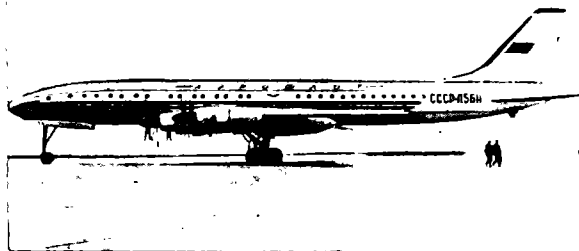
Mfr.	ANTONOV	Max. Speed (Knots)	400 approx.
Wing Span	120'	Service Ceiling (Ft.)	40,000 approx.
Length	110'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	75,000 approx.	Model No.	
Max. Range (Naut. Miles)	1,500 approx.	Mfr.	
Crew No.	5	Rating Each	3,500 s. hp. approx.



The Cat (AN-10) is a four-engined, high-wing, passenger-transport aircraft designed by Antonov. Its wings have tapered leading edges, straight trailing edges, and square tips. The four engine nacelles are underslung, with the inboard nacelles extending farther forward of the wing's leading edge than the outboard nacelles. A single tail is fitted and a small ventral fin is mounted under the rear of the fuselage. The rather chunky fuselage has a transparent nose with a blister beneath, presumably for navigation radar. A retractable tricycle-type landing gear is fitted with the main wheels retracting into elongated blisters on either side of the fuselage. The Cat was first displayed in July, 1957 at Vnukovo. It is called "Ukrania" by the Soviets.

CLEAT

TUPOLEV



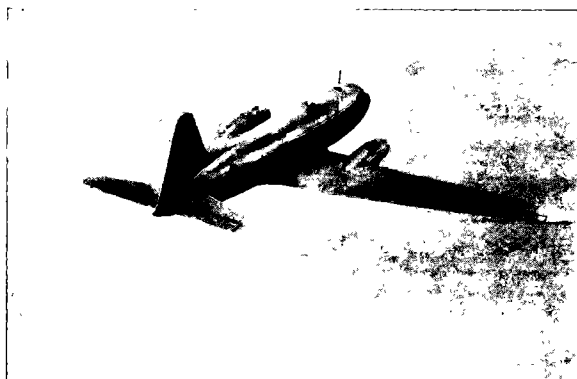
Mfr.	TUPOLEV	Max. Speed (Knots)	475
Wing Span	170'	Service Ceiling (Ft.)	35,000
Length	180'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	300,000 plus	Model No.	
Max. Range (Naut. Miles)	4,000	Mfr.	KUZNETSOV
Crew No.	15	Rating Each	12,000 s. hp. approx.



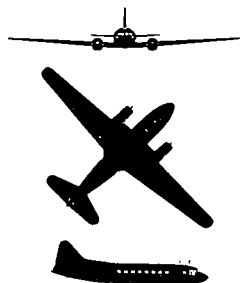
The Cleat (TU-114) is a very large, four-engined, turboprop passenger transport. It is derived from the Bear heavy bomber, whose wings, tail, and engine nacelles it copies. The fuselage of the Cleat, however, presents a more streamlined appearance and is much larger and longer than the Bear. Reportedly, the Cleat can carry 120 passengers nonstop from Moscow to New York at a cruising speed of approximately 500 m.p.h., and its maximum capacity is 220 passengers. The Cleat made its first flight during 1957 to mark the fortieth anniversary of the Russian Revolution. A TU-114D, a modified Bear with windows, made a 20,000-mile flight in the summer of 1958. Three stops were made during the course of the flight around the periphery of the U.S.S.R.

COACH

ILYUSHIN



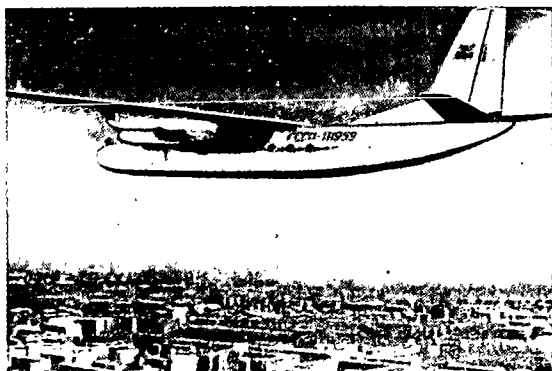
Mfr.	ILYUSHIN	Max. Speed (Knots)	225 S/L
Wing Span	104'	Service Ceiling (Ft.)	26,000 approx.
Length	69'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	30,000 approx.	Model No.	Ash-82
Max. Range (Naut. Miles)	1,330 approx.	Mfr.	ASH
Crew No.	4	Rating Each	1,825 hp.



The Coach (IL-12) is a twin-engined, medium-range, passenger transport. Its low wing has slight positive dihedral; the center section is rectangular and the outer sections taper to rounded tips. Split landing flaps extend the entire span of the center section. The Coach has a single tail and a retractable tricycle-type landing gear. Versions exist with passenger capacities from 18 to 32. The Coach is similar to the C-47/R4D, except that its wings are placed farther aft than are the C-47's. The Coach has been seen on numerous occasions this side of the Iron Curtain, flying European air routes for the U.S.S.R. and satellites. A newer version with a square rudder is called the Crate (IL-14).

ANTONOV

COKE



Mfr.	ANTONOV	Max. Speed (Knots)	283
Wing Span	Less than 120' (estimated)	Service Ceiling (Ft.)	20,000
Length	Less than 103' (estimated)	No. & Type of Engines	2 Turboprop
Combat Weight (Lbs.)		Model No.	
Max. Range (Naut. Miles)	1,000	Mfr.	IVCHENKO
Crew No.	4	Rating Each	2,000 eshp.

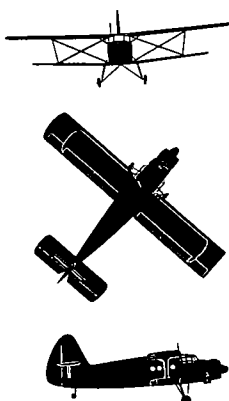
The Coke (An-24), a twin-turboprop civil airliner, was developed rapidly and went into flight testing in 1960. Although apparently somewhat smaller, it has been variously described as resembling Cat and Camp, which too are products of Antonov's design shops; it has also been compared with the Fokker/Fairchild Friendship and the Handley-Page Herald. Its fuselage is low-slung, with a sharp upsweep in the aft under-section. The turboprop engines are wing-mounted with lower nacelles providing accommodation for the retracted main landing gear. Wings are set on the fuselage, above the cabin, and have a noticeable outboard taper. The tall vertical stabilizer joins into the fuselage with an angular dorsal fairing; the up-swept horizontal stabilizer is set high and far back on the fuselage. Configuration of both the fuselage and the vertical fin are reminiscent of Antonov's earlier designs.

ANTONOV

COLT



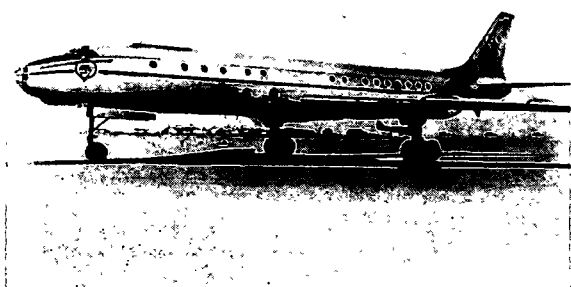
Mfr.	ANTONOV	Max. Speed (Knots)	150
Wing Span	60'	Service Ceiling (Ft.)	16,000 approx.
Length	42'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	9,000 approx.	Model No.	Ash
Max. Range (Naut. Miles)	900 approx.	Mfr.	ASH
Crew No.	2	Rating Each	900 approx.



The Colt (AN-2) is a single-engined biplane that at present is in service in large numbers with the Soviet Air Force as well as with satellite nations. Recognition features include unequal-span wings braced together by two single struts placed about two-thirds outboard of the fuselage; a horizontal stabilizer mounted midway up the rudder, with brace supports attached to the fuselage; and a large, curved fin and rudder. A fixed, tailwheel-type landing gear is fitted. The Colt can operate out of small airfields and performs utilitarian duties, such as passenger and cargo transport, photographic work, and rescue and ambulance operations.

COOKER

TUPOLEV



Mfr.	TUPOLEV	Max. Speed (Knots)	540
Wing Span	122'	Service Ceiling (Ft.)	39,370 approx.
Length	126'	No. & Type of Engines	4 Turbojet
Combat Weight (Lbs.)	175,000 approx.	Model No.	
Max. Range (Naut. Miles)	2,700 approx.	Mfr.	LYULKA
Crew No.	3	Rating Each	12,000 #



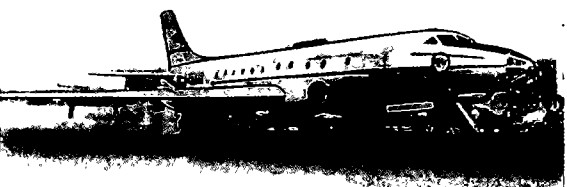
The Cooker (Tu-110) is a multi-engined civil transport derived from the Camel. Except for its four jet engines mounted in lateral pairs in the wing roots, and its slightly increased overall length, this aircraft generally resembles its forerunner. Engines are staggered with the wing sweep and protrude fore and aft of the edges. The low-mounted wings are sweptback and moderately tapered with a slight crescent shape. Stabilizers are unequally sweptback and, like the wings, have squared-off tips. The horizontal stabilizer is mounted on the fuselage. The Cooker can carry up to 100 passengers.

COOKPOT

TUPOLEV



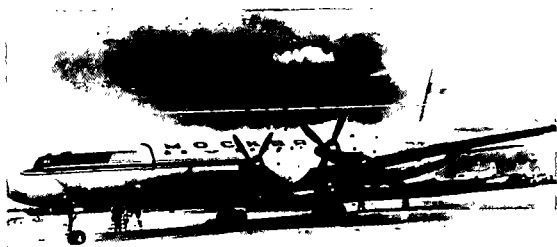
Mfr.	TUPOLEV	Max. Speed (Knots)	538
Wing Span	Less than 114' (estimated)	Service Ceiling (Ft.)	33,000
Length	Less than 124' (estimated)	No. & Type of Engines	2 Turbofan
Combat Weight (Lbs.)		Model No.	
Max. Range (Naut. Miles)	800	Mfr.	SOLOVIEV
Crew No.	4-6	Rating Each	



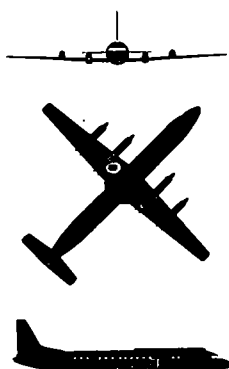
The Cookpot (Tu-124) is a low-wing, twin-engine, medium-range civil transport, first of the Soviet transports to be powered by turbofan-type jet engines. The aircraft made its first appearance at Russian airports late in 1959 and went into serial production in 1960. Derived from the Camel, Cookpot resembles the parent aircraft in external configuration but is somewhat smaller. Its landing gear is about one foot shorter than that of Camel, its fuselage also is shorter, and it has sharper engine air ducts and wing leading edges. The only other apparent external difference on the later aircraft is an increase in engine air duct inlet area for the fan engines. Seating up to 68 passengers, Cookpot was designed to be used as an eventual replacement for older piston powered aircraft on USSR domestic airline routes.

ILYUSHIN

COOT



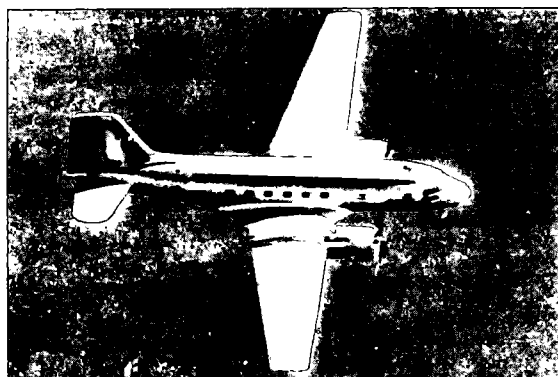
Mfr.	ILYUSHIN	Max Speed (Knots)	350
Wing Span	123'	Service Ceiling (Ft.)	30,000 approx.
Length	117'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	128,000	Model No.	AI-20
Max. Range (Naut. Miles)	2,800	Mfr.	IVCHENKO
Crew No.	5	Rating Each	4,000 eshp.



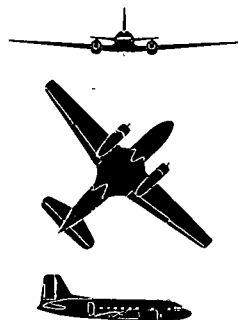
The Coot (IL-18) is a four-engine, turboprop civil transport used by the USSR on international services as well as internal routes. In flight, the aircraft generally resembles the DC-6 but closer view shows its engines to be mounted well forward and atop the wings in a manner similar to the engine installations on the Lockheed Electra. Underwing nacelles for the main landing gear are incorporated with the inboard engines. The wings are low-mounted midway on the fuselage and neither they nor the tail surfaces are swept. The straight vertical stabilizer fairs into the fuselage, and the horizontal stabilizer is fuselage-mounted. The Coot can carry up to 100 passengers, with about 75 in the normal first-class configuration.

ILYUSHIN

CRATE



Mfr.	ILYUSHIN	Max. Speed (Knots)	265 approx.
Wing Span	104'	Service Ceiling (Ft.)	23,000 approx.
Length	70'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	30,000 plus	Model No.	Ash-82
Max. Range (Naut. Miles)	1,500 approx.	Mfr.	ASH
Crew No.	4	Rating Each	1,900 hp.



The Crate (IL-14), a low-wing twin-engined transport, is the backbone of Soviet air transportation. It differs from the Coach (IL-12) mainly in that it has a squared rudder and blunter wing tips. It retains the Coach's tapered wings, dorsal fin, and retractable, tricycle-type landing gear with dual main wheels that retract into the engine nacelles. The Crate is produced in East Germany and Czechoslovakia as well as in the Soviet Union. IL-14's have been given to the heads of state of many African and Asian nations for their personal use. Egypt and Indonesia have received large numbers of these aircraft. Later versions have been built with slightly longer fuselages.

CUB

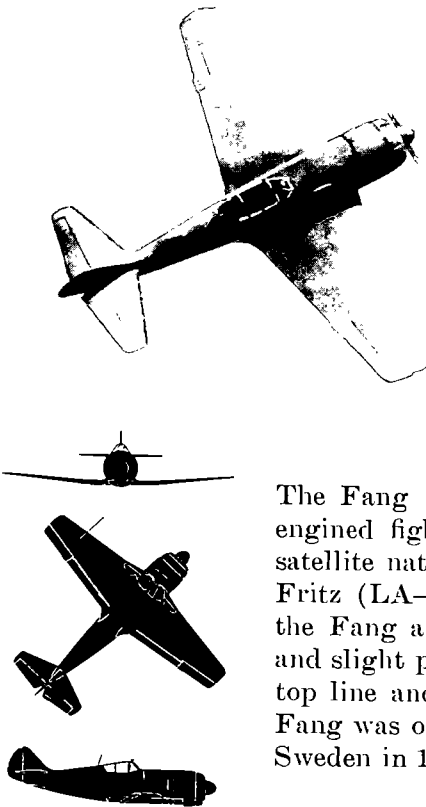


ANTONOV

Mfr.	ANTONOV	Max. Speed (Knts)	390 (estimated)
Wing Span	124'	Service Ceiling (Ft.)	32,000
Length		No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	140,000 (estimated)	Model No.	AI-20
Max. Range (Naut. Miles)		Mfr.	IVCHENKO
Crew No.		Rating Each	4,000 eshp.

The Cub (An-12) four-turboprop heavy cargo/transport is a military variant of the Soviet Cat (An-10A) civil airliner. It has wings, engines, and forward fuselage similar to those of the Cat, but incorporates a new rear fuselage and redesigned tail surfaces. Features differentiating the fuselage are a pronounced upsweep in the aft undersection and a rear gun turret. The angular, tapered vertical stabilizer, with sharply squared-off tip, has a deeper dorsal fairing into the fuselage. The horizontal stabilizer, mounted high on the fuselage tail section, lacks the auxiliary vertical control surfaces which appear on the commercial Cat.

FANG



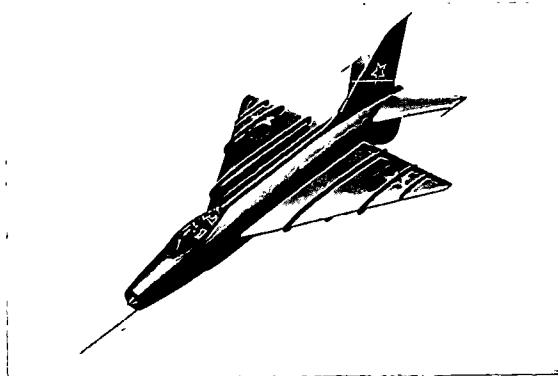
LAVOCHKIN

Mfr.	LAVOCHKIN	Max. Speed (Knts)	355
Wing Span	31'8"	Service Ceiling (Ft.)	32,000
Length	27'6"	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	8,800	Model No.	Ash-82 FNV
Max. Range (Naut. Miles)	950	Mfr.	ASH
Crew No.	1	Rating Each	1,825 hp.

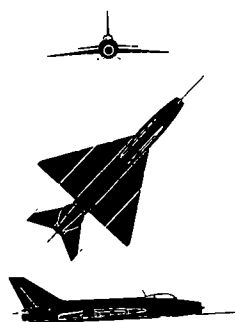
The Fang (LA-11) is a low-wing, single-seat fighter. It is the last Soviet piston-engined fighter and is probably still in service in small numbers with Sino-Soviet satellite nations. This all-metal aircraft is very similar in appearance to the earlier Fritz (LA-9); both are postwar variants of the LA-5—LA-7 series. The wings of the Fang are tapered on the leading and trailing edges with squared-off wing tips and slight positive dihedral. Horizontal tail surfaces are mounted below the fuselage top line and have the same general outline as the wings. A battered sample of the Fang was obtained and placed on view when a defecting Soviet pilot crash-landed in Sweden in 1949.

SUKHOI

FISHBED

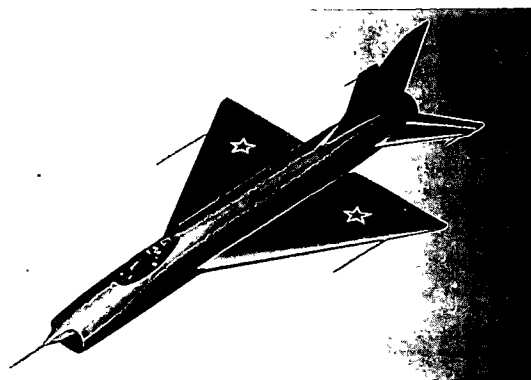


Mfr.	SUKHOI	Max. Speed (Knots)	Approx. Mach 1.5 plus
Wing Span	25' approx.	Service Ceiling (Ft.)	60,000 approx.
Length	50' approx.	No. & Type of Engines	1 Turbojet
Combat Weight (Lbs.)	12,000 approx.	Model No.	
Max. Range (Naut. Miles)	1,000 approx.	Mfr.	
Crew No.	1	Rating Each	12,000 approx.

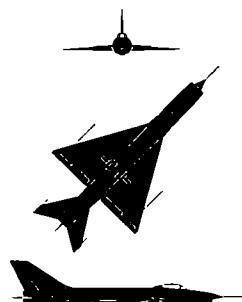


The Fishbed A and Fishbed B are delta-wing, supersonic day-fighters. They were first seen together with the Fishpot, which they resemble closely, in 1956 at a Soviet Aviation Display. The Fishbed A has the same tubular fuselage and general configuration as Fishbed B, with the exception of pointed wingtips and a modified fairing at the horizontal tail-fuselage junction. Both the A and B have a fixed compression cone in the center of the air intake. A tricycle landing gear is fitted on both. Armament probably consists of two guns on the underside of the fuselage.

FISHPOT



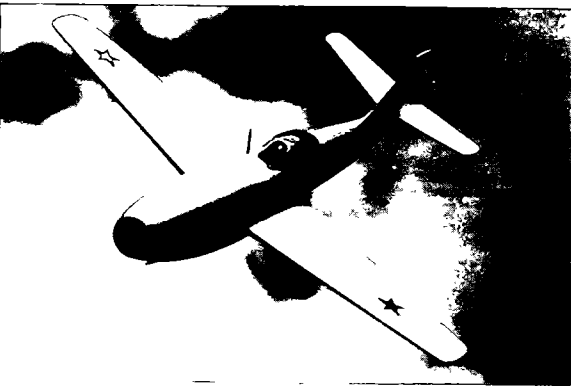
Mfr.		Max. Speed (Knots)	Approx. Mach 2
Wing Span	25' approx.	Service Ceiling (Ft.)	50,000 approx.
Length	50' approx.	No. & Type of Engines	1 Turbojet
Combat Weight (Lbs.)	13,000 approx.	Model No.	
Max. Range (Naut. Miles)	1,000 approx.	Mfr.	
Crew No.	1	Rating Each	14,000# plus



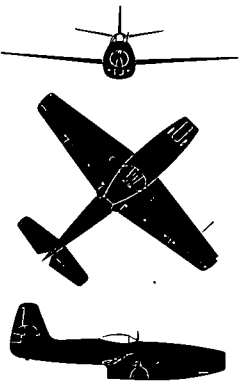
The Fishpot is a delta-wing, all-weather, supersonic fighter. It was first seen by Western observers in 1956, and now is believed to be in full-scale production. Recognition features of this Mach 2 fighter include a long, tubular fuselage with slight taper aft of the wing's trailing edge; a midmounted delta wing with approximately 50° sweepback on the leading edge; a conventional sweptback tail assembly with squared tips; and a cone-shaped radar installation at the top of the air intake. A retractable tricycle-type landing gear is fitted. The Fishpot is powered by a high-thrust turbojet engine.

FLORA

YAKOVLEV



Mfr.	YAKOVLEV	Max. Speed (Knots)	500 approx.
Wing Span	28'	Service Ceiling (Ft.)	50,000 approx.
Length	27'	No. & Type of Engines	1 Turbojet
Combat Weight (Lbs.)	7,000 approx.	Model No.	
Max. Range (Naut. Miles)	500 approx.	Mfr.	RD
Crew No.	1	Rating Each	3,500# approx.



The Flora (Yak-23) is a single-seat jet fighter that followed the Feather (Yak-17) in the series of Yak fighters. Although it bears a superficial resemblance to the earlier Yak jets, the Flora is almost entirely different. The changes incorporated in it go far beyond the slight innovations marking the emergence of the Feather. The fuselage presents a chunkier appearance with the forward portion noticeably deeper. Among other things, this provides for full retraction of the tricycle landing gear, eliminating the nosewheel fairing which distinguished the Feather. The Flora's wing taper is less pronounced, the span is reduced, and the tips are blunt. A slight change of height in the fin is noticeable, while the horizontal surfaces have been altered radically.

HARE

MIL



Mfr.	MIL	Max. Speed (Knots)	100
Rotor Span	46'	Service Ceiling (Ft.)	±0,000
Length	40'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	5,000 approx.	Model No.	AI-26V
Max. Range (Naut. Miles)	385	Mfr.	AI
Crew No.	2	Rating Each	550 hp.



The Hare (MI-1) is a single-rotor general-purpose helicopter designed by Mikhail H. Mil and previously designated the Type 32. It was the first modern type helicopter designed by the Soviets. Recognition features include a pylon fairing on top of the fuselage, a transparent section on the underside of the nose, and a fixed tricycle-type landing gear. The Hare can accommodate a pilot and either two or three passengers. The three-passenger version can be recognized by two small, horizontal stabilizers at the rear of the tail boom. The Hare is also produced in Poland as the SM-1.

MIL

HOOK



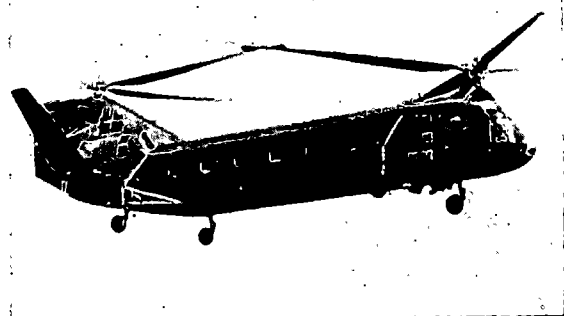
Mfr.	MIL	Max. Speed (Knots)	190
Wing Span	115'	Service Ceiling (Ft.)	
Length	120' (estimated)	No. & Type of Engines	2 Turbine
Combat Weight (Lbs.)	70,000	Model No.	TB-2BM
Max. Range (Naut. Miles)	380	Mfr.	SOLOVIEV
Crew No.		Rating Each	4,700 eshp.



The Hook (Mi-6) is a heavy transport helicopter, the world's largest at the time of its unveiling in 1958. It has a normal seating capacity for 70-80 passengers and is capable of transporting heavy equipment such as tractors and bulldozers to remote, inaccessible regions. Its two turbine engines, powering the five-bladed single main rotor, are set above the cockpit and cabin accommodations and, when viewed from the front, seem like two monstrous bug-eyes. The smaller (diameter about 23 feet) four-bladed anti-torque rotor is mounted on the starboard side and at the tip of the vertical stabilizer. A stublike, movable semi-span wing is set high on each side of the fuselage just aft of the main rotor head. The Hook has established several different weight-to-height records, and has carried a load of 22,050 pounds to a 16,045-foot altitude.

YAKOVLEV

HORSE



Mfr.	YAKOVLEV	Max. Speed (Knots)	150 approx.
Rotor Span	70'	Service Ceiling (Ft.)	18,000 approx.
Length	70'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	25,000 approx.	Model No.	Ash-82V
Max. Range (Naut. Miles)	300 plus	Mfr.	ASH
Crew No.	2	Rating Each	1,800 approx.



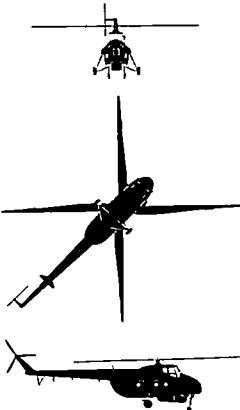
The Horse (Yak-24) is a dual-rotor transport helicopter. This Yakovlev design was first seen at a Soviet Aviation Display in 1955. Recognition features include a long rectangular fuselage with a transparent nose and a square, upswept after-section; a fixed four-wheel landing gear; and two rotors, the rear one higher than the forward one. Each of the Horse's two engines is capable of operating both rotors. A crew of three or four is carried, and up to 40 passengers can be accommodated. A Horse set two world records on December 17, 1955, when it carried a load of 4,009 lbs to a height of 16,673 ft and a load of 8,818 lbs to 6,562 ft.

HOUND

MIL



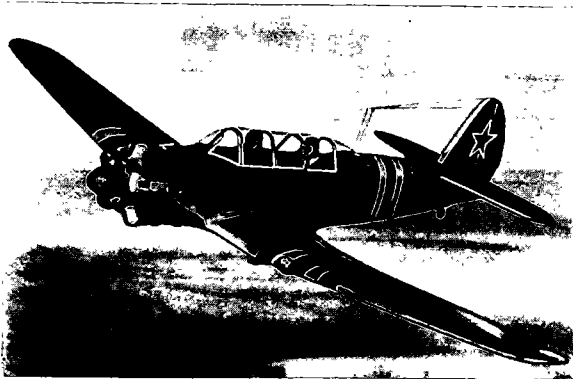
Mfr.	MIL	Max. Speed (Knots)	140 approx.
Rotor Span	70'	Service Ceiling (Ft.)	18,000 approx.
Length	55'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	11,000 approx.	Model No.	Ash-82
Max. Range (Naut. Miles)	200 approx.	Mfr.	ASH
Crew No.	2	Rating Each	1,800 hp.



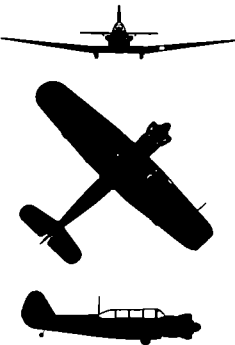
The Hound is a single-rotor general purpose helicopter. Recognition features include a droop-snoot look, a container attachment mounted on the underside of the fuselage, and a fixed, four-wheel landing gear. The Hound carries a crew of two and can accommodate ten passengers or fourteen troops. Bulky freight is loaded through clamshell doors at the rear of the main fuselage. Besides passenger and cargo transport, the Hound is used for agricultural and fire-fighting purposes. On April 26, 1956, a modified Hound set an altitude record of 19,843 ft. The Hound has seen service in the Arctic and Antarctic.

MAX

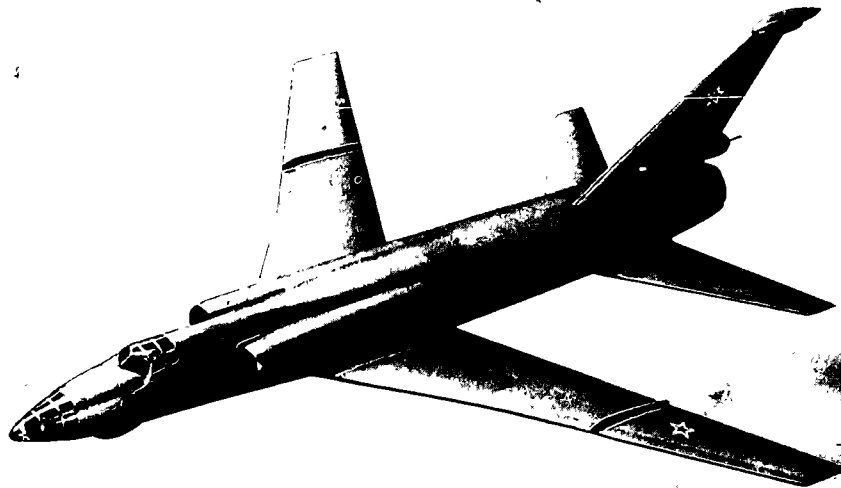
YAKOVLEV



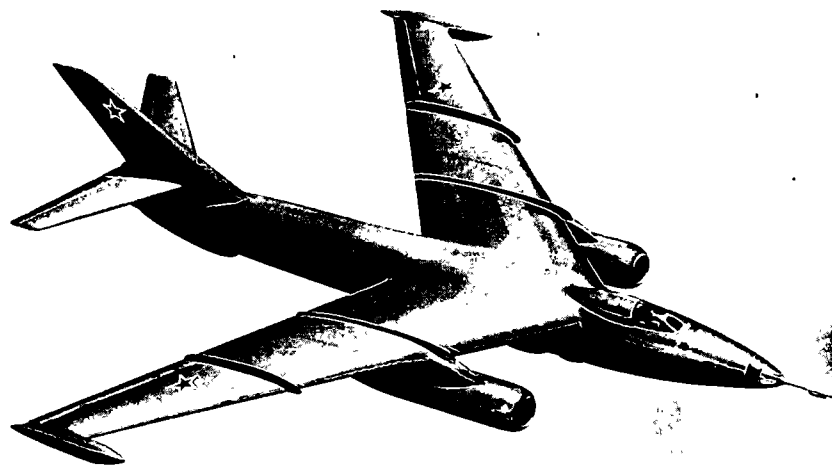
Mfr.	YAKOVLEV	Max. Speed (Knots)	125 S/L
Wing Span	34'9"	Service Ceiling (Ft.)	13,000
Length	26'6"	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	2,400	Model No.	
Max. Range (Naut. Miles)	500 approx.	Mfr.	
Crew No.	2	Rating Each	160 hp.



The Max (Yak-18) is a two-seat piston-engined low-wing trainer. It was developed from Yakovlev's earlier Mink (UT-2) and retains the distinctive "helmeted" engine cowlings. The wings have a rectangular inner section without dihedral, while the outer section tapers to rounded tips and has positive dihedral. The occupants sit in tandem beneath the long canopy which has separate rearward sliding hoods. The landing gear consists of a fixed tail wheel and semiretractable main wheels, half of which remain exposed when they are retracted. A single tail with rounded tips is fitted. Receiver, transmitter, and blind-flying instruments are carried by the Max.



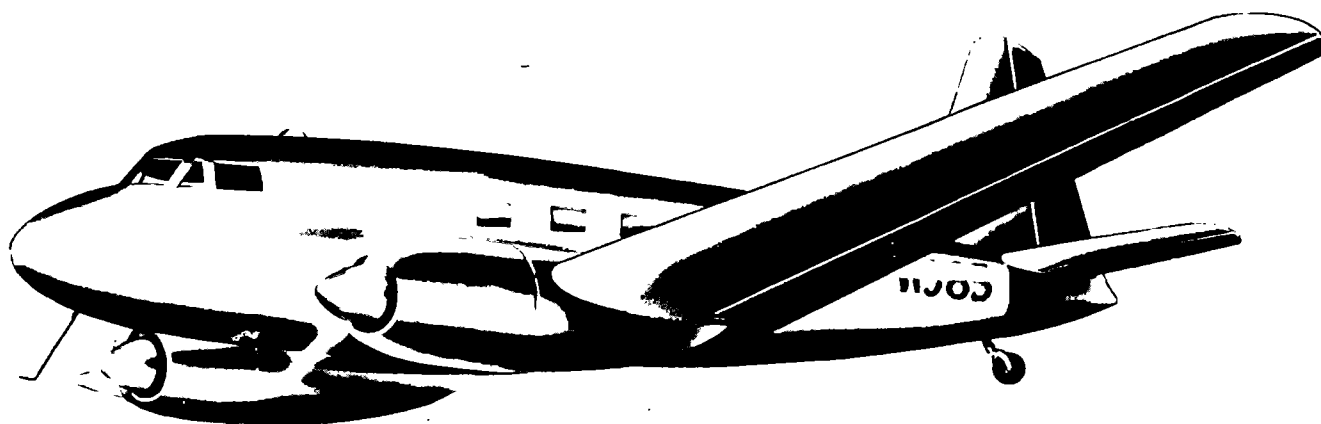
The BACKFIN is a swept-wing twin-jet supersonic light bomber first seen during the summer of 1957.



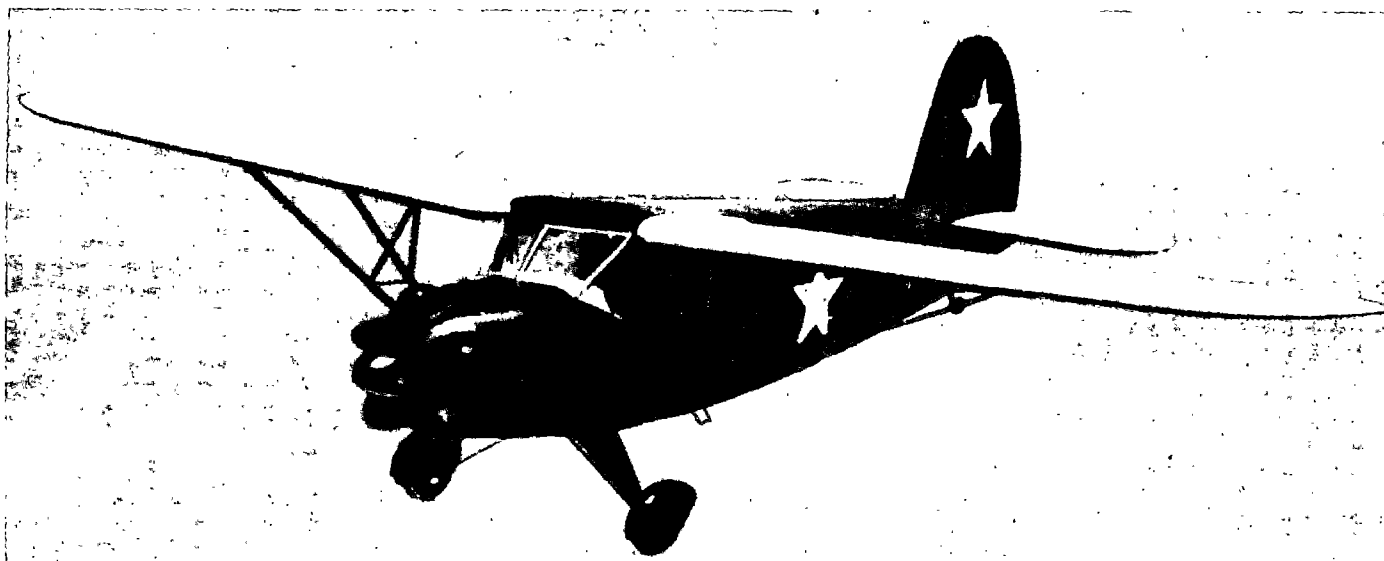
The BLOWLAMP has two turbojets mounted in pods beneath the wings in a manner similar to the U.S. B-66.



The design of the CART (TU-10) was based on the U.S. B-29, to which it bears a resemblance.



The CORK (Yak-16) is used mostly as a short-run commercial airliner by Aeroflot.



The CREEK (Yak-12) can be used for passenger and freight transport, glider towing, ambulance work and agricultural duties.



The FARGO (MIG-9) was the first operational jet fighter to appear in the U.S.S.R.



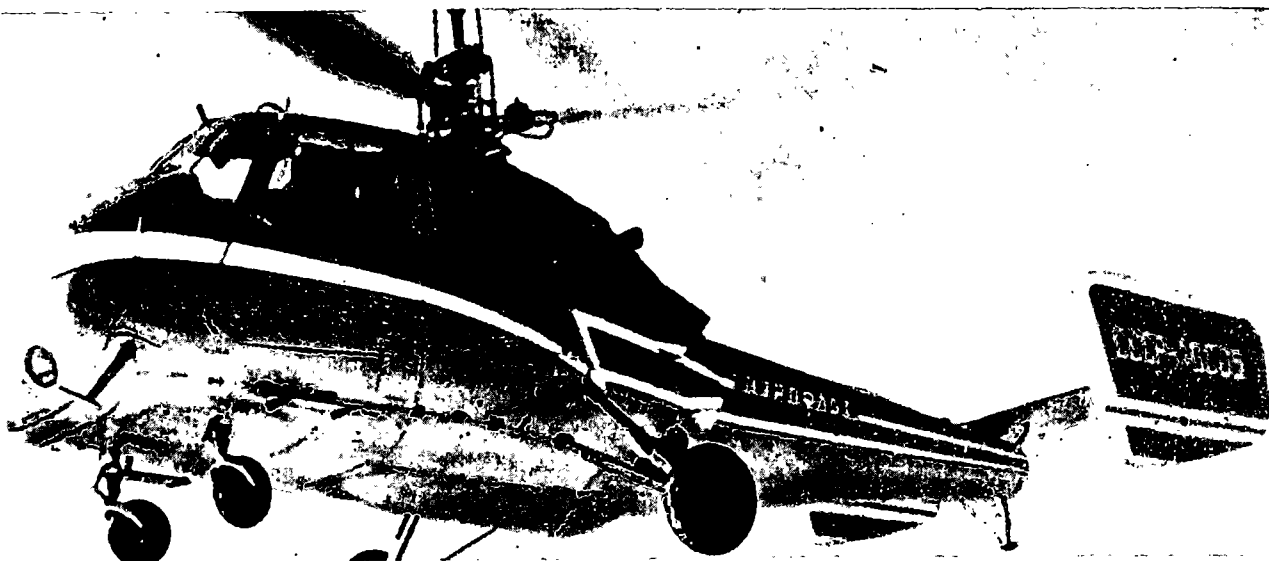
The FEATHER (Yak-17) has the same poorly situated bubble canopy and the same tapered wings as its predecessor, the Yak-15.



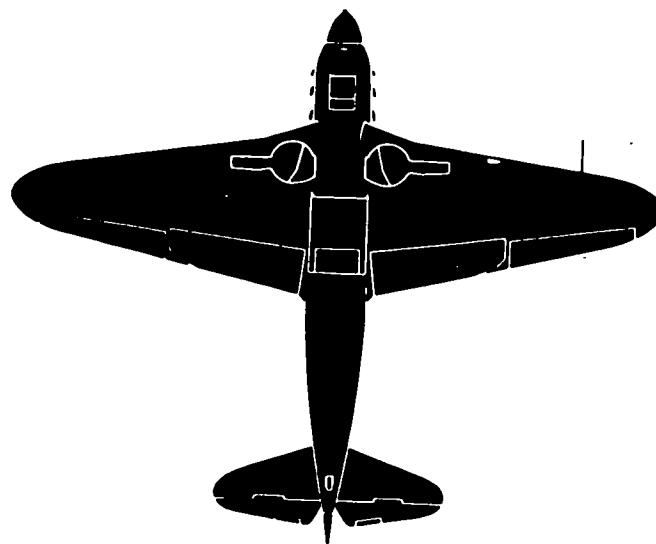
The HAT (KA-10).



The HEN (KA-15).



The HOG (KA-18).



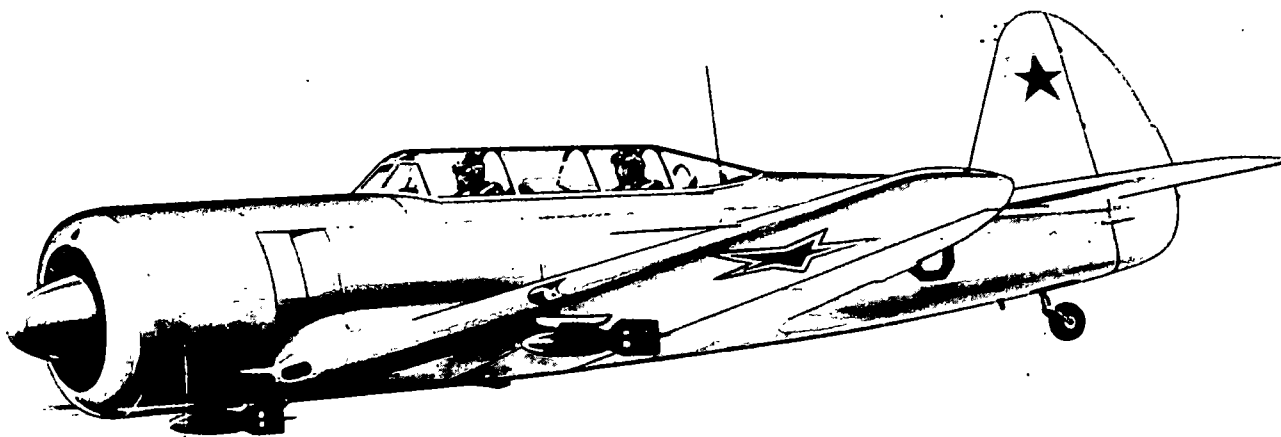
The MARK (Yak-7) two-seat piston-engine trainer.



The MASCOT (UIL-28) is a trainer version of the Beagle (IL-28) light bomber.



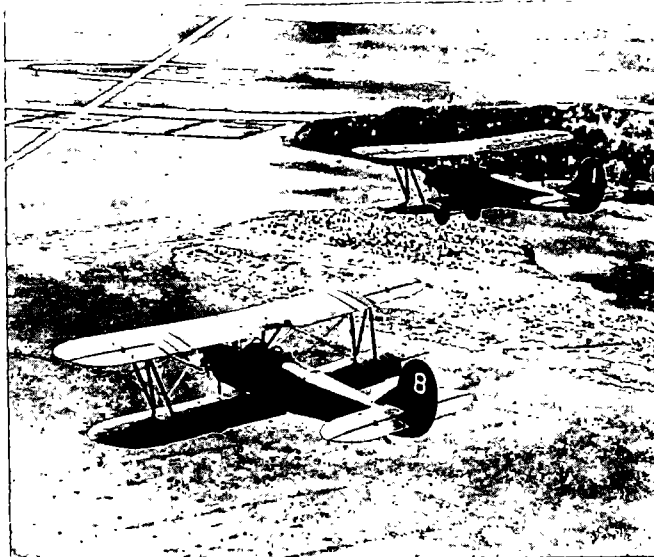
The MIDGET (UMIG-15) is a two-seat trainer version of the Fagot (MIG-15) jet fighter.



The MOOSE (Yak-11) is a descendent of the Yak-3 and Yak-9, and is used as a trainer in satellite nations.

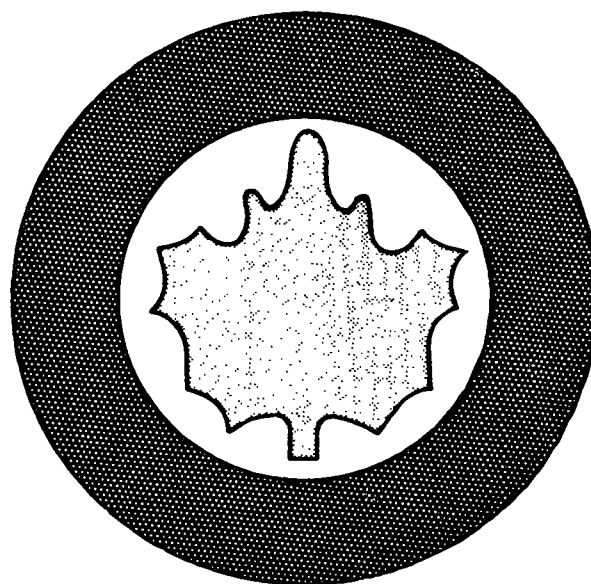


The MOP (GST) is the U.S. PBY Catalina, built under license in the U.S.S.R.



The MULE is one of the oldest Soviet aircraft still in use.

CANADA



CANADA

CANADA

ROYAL CANADIAN AIR FORCE

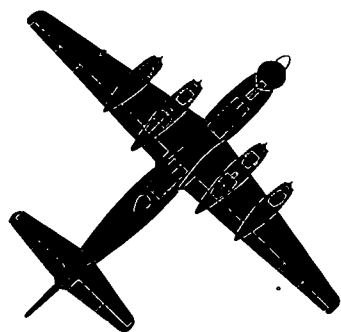
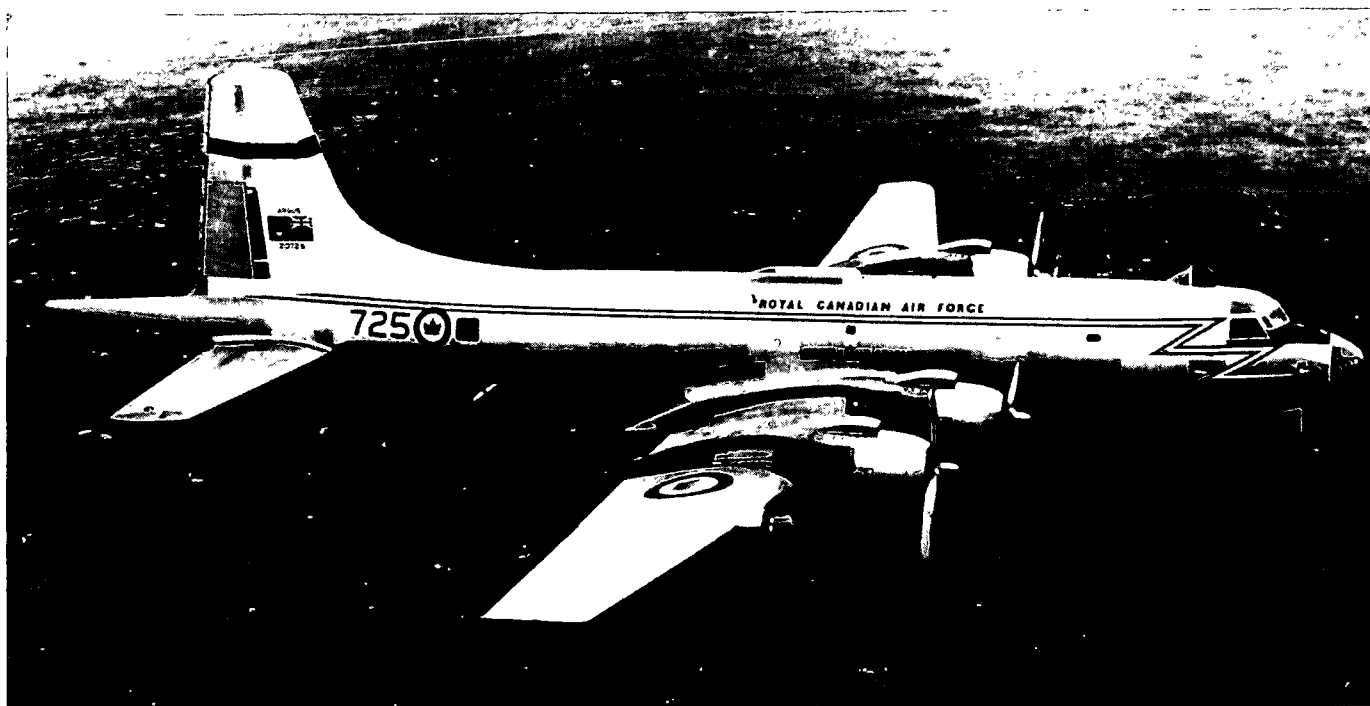
Type	Designation	Manufacturer	Country
ASW	Argus CP-107	Canadair	Canada
	P2V-7 Neptune	Lockheed	U.S.A.
Fighter	CF-100 Mk. 4 Canuck	Avro	Canada
	CF-100 Mk. 5 Canuck	Avro	Canada
	Sabre Mk. 5	Canadair	Canada
	Sabre Mk. 6	Canadair	Canada
Reconnaissance	Lancaster 10	Avro	U.K.
Transport	Bristol 170 Mk. 31	Bristol	U.K.
	C-119F	Fairchild	U.S.A.
	CC-106 (CL-44)	Canadair	Canada
	CC-109 (CL-66)	Canadair	Canada
	Comet 1A	de Havilland	U.K.
	Dakota (C-47)	Douglas	U.S.A.
	North Star	Canadair	Canada
Trainer	CF-100 Mk. 3	Avro	Canada
	Chipmunk (DHC-1)	de Havilland	Canada
	CL-41	Canadair	Canada
	Harvard Mk. 4	Can-Car	Canada
	T-33A Mk. 3 Silver Star	Canadair	Canada
Helicopter	*H-13	Bell	U.S.A.
	H-19	Sikorsky	U.S.A.
	H-21	Vertol	U.S.A.
	H-34A	Sikorsky	U.S.A.
	*S-51	Sikorsky	U.S.A.
Miscellaneous	*Bird Dog	Cessna	U.S.A.
	C-45 Expeditor	Beech	U.S.A.
	Otter (DHC-3)	de Havilland	Canada
	PBY-5A Canso	Convair	U.S.A.
	TB-25J Mitchell	North American	U.S.A.

*Army Aviation.

ROYAL CANADIAN NAVAL AIR ARM

Type	Designation	Manufacturer	Country
ASW	CS2F-1	de Havilland	Canada
Fighter	F2H-3 Banshee	McDonnell	U.S.A.
Trainer	T-33 Silver Star	Canadair	Canada
Helicopter	HO4S	Sikorsky	U.S.A.
	HTL-4	Bell	U.S.A.
	HUP-3	Vertol	U.S.A.
Miscellaneous	C-45 Expeditor	Beech	U.S.A.



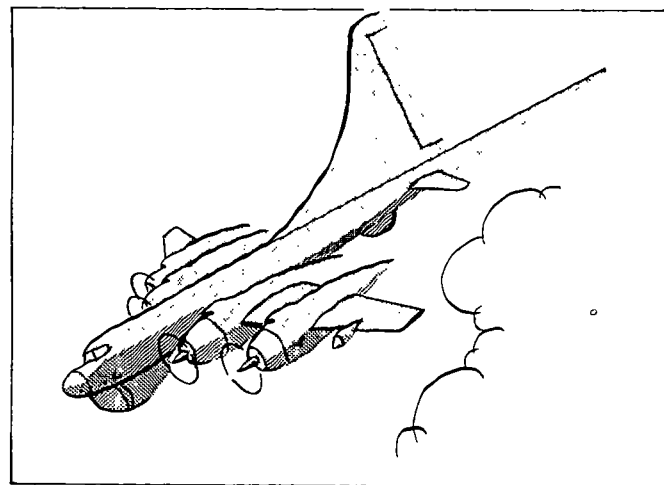
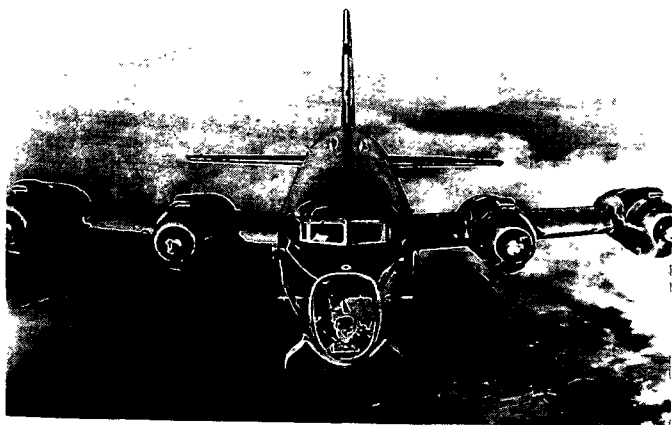
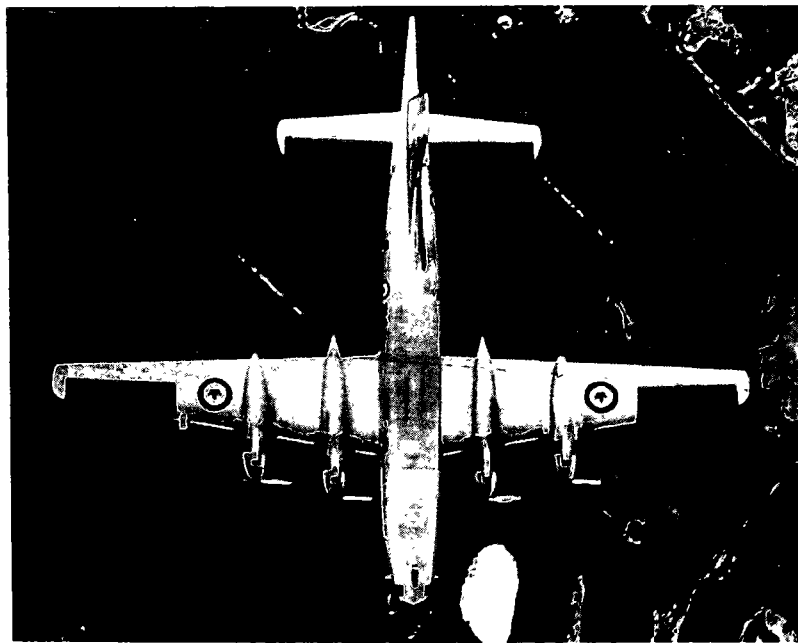


The Argus CL-28 (RCAF designation CP-107) is a maritime reconnaissance aircraft, driven by four piston engines and derived from the Bristol Britannia design. The airplane has a low mounted, unequally backward tapered, blunt tipped wing set with slight positive dihedral. Each of the engine nacelles extends beyond the wing trailing edge. Roughly cigar-shaped, the fuselage is glassed in at the nose, with a stepped up cockpit, an under-chin radome, and a tail boom housing Magnetic Anomaly Detection (MAD) gear. In addition, a small ECM antenna is located above the flight deck. The equitapered horizontal stabilizer is midmounted, has blunt tips, and no dihedral. A curved fairing is used at the forward root of the tapered, blunt tipped vertical stabilizer. Two versions (Mks) were initially produced, the second version being distinguished by a smaller "chin" radome. Designed specifically for long-range submarine detection/destruction, the Argus can carry internally 4,000 pounds of the latest antisubmarine weapons, including homing torpedoes. Provisions are made for carrying two 3,800-pound missiles under the wings.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	CANADAIK	Max. Range (Naut Miles)	3,480	No. of Engines	4
Wing Span	142'	Crew No.	15 max.	Model No	R-3350-EA-1
Length	128'	Max. Speed (Knots)	250	Mfr.	WRIGHT
Combat Weight (Lbs.)	148,000	Service Ceiling (Ft.)	20,000	Type	Piston
				Rating Each	3,700 hp.

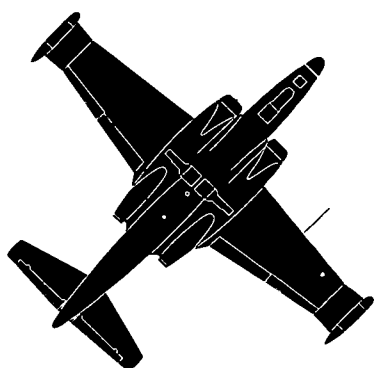
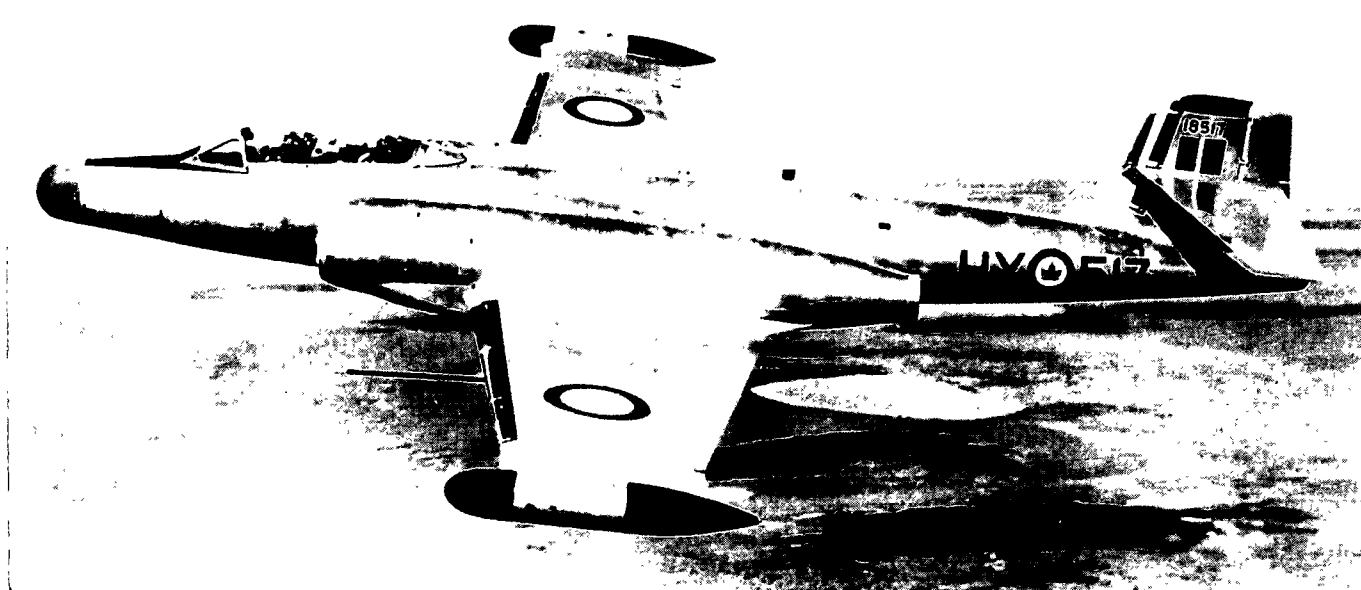
ARGUS

CANADAIR



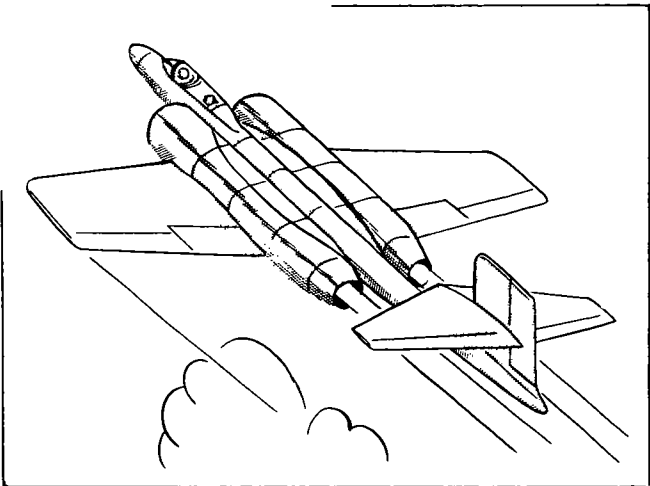
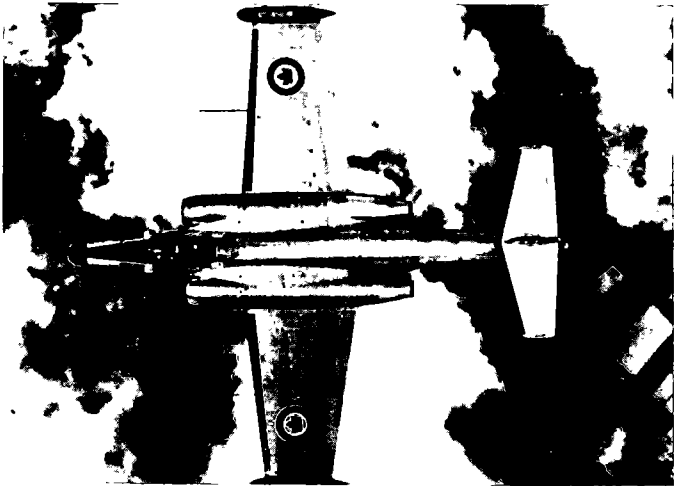
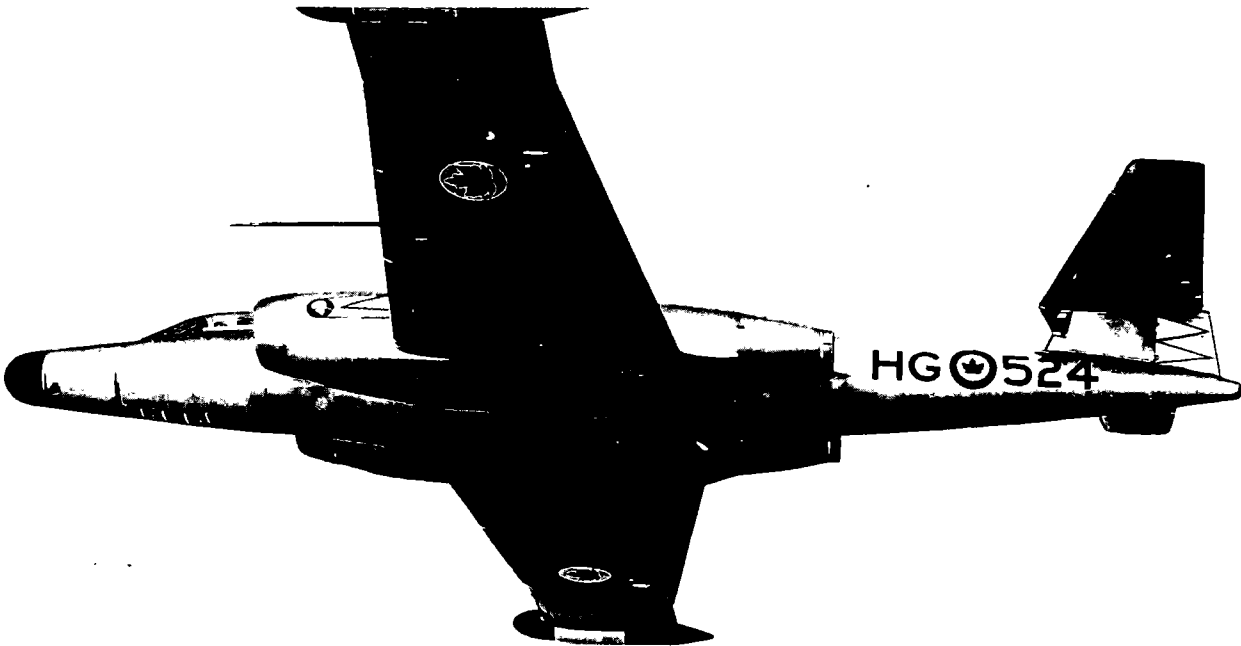
AVRO

CF-100 CANUCK



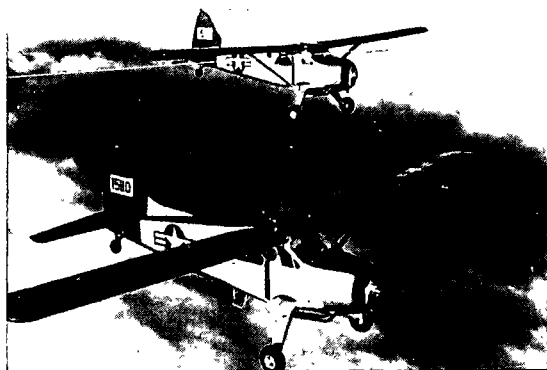
The CF-100 Canuck is a twin-jet, two-place, long-range, all-weather fighter designed and built in Canada. Extremely long nacelles house the powerful Orenda engines, mounted above the wing root and close to the fuselage. The horizontal tail surfaces are mounted halfway up the tail fin. Small-diameter double nose wheel and double main wheels are retractable. The pilot and radar operator sit in tandem with the pilot in front and the radar operator in back. Although production of the CF-100 terminated in 1958, the aircraft remained in service with the RCAF and the Belgian Air Force in considerable numbers at least through 1961. Final production version was the Mk. 5, which had increased wing and tail area plus an all-rocket armament system.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr	AVRO	Max Range (Naut. Miles)	1,740	No. of Engines	2
Wing Span	61'	Crew No.	2	Model No.	Orenda Mk. 11
Length	54'	Max Speed (Knots)	568	Mfr	ORENDA
Combat Weight (Lbs)	33,600	Service Ceiling (Ft)	54,000	Type	Turbojet
				Rating Each	7,000 # s.t.



De HAVILLAND

BEAVER

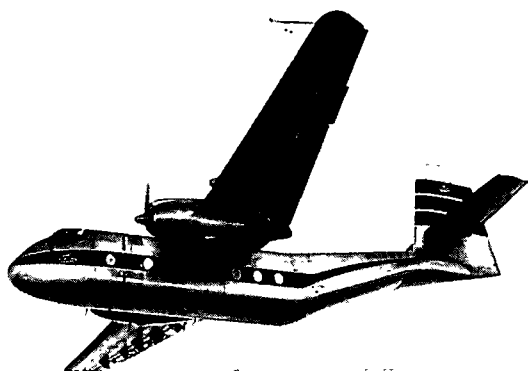


Mfr	DE HAVILLAND	Max Speed (Knots)	142
Wing Span	48'	Service Ceiling (Ft.)	15,750
Length	30'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	5,100	Model No.	R-985 AN-3
Max. Range (Naut. Miles)	635	Mfr.	WRIGHT
Crew No	1 or 2	Rating Each	450 hp.

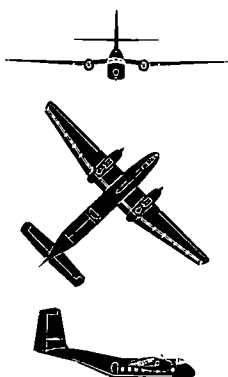
The high-braced wing de Havilland DHC-2 Beaver is a light, single engined landplane, seaplane, or skiplane which may be used in a variety of roles. Its wing is rectangular in shape, with blunt raked tips and slight positive dihedral. The single radial engine mounted in the nose gives the forward fuselage a rectangular appearance. Landing gear is fixed on all configurations. The horizontal stabilizer is equitapered, with no dihedral, and has blunt, raked tips. A curved, forward root dorsal fairing merges with the pointed-tip vertical stabilizer to complete the tail section. The Beaver has been used in the air arms of many nations, including the United States; in the U.S. Air Force and U.S. Army its designation is L-20. The photograph above is of the L-20.

De HAVILLAND

CARIBOU



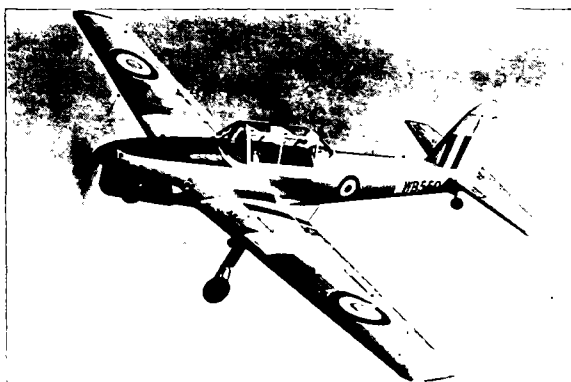
Mfr	DE HAVILLAND	Max. Speed (Knots)	185
Wing Span	96'	Service Ceiling (Ft.)	26,000
Length	73'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	26,000	Model No.	R-2000 D-5
Max. Range (Naut. Miles)	1,172	Mfr.	P & W
Crew No	2 or 3	Rating Each	1,450 hp.



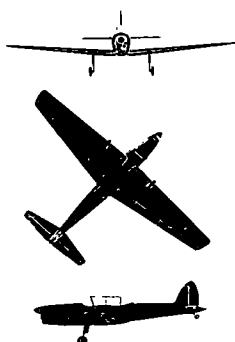
The DHC-4 Caribou (Canadian Army designation CC-108) is a twin-radial-engined, all-weather, STOL utility transport. Its high-mounted gull wing is rectangular in shape from root to engine, outboard of which it is forward tapered with straight leading edge to the blunt raked tips. Appearing cigar-shaped in plan view, the fuselage is kicked up at the rear to provide clearance for the rear loading ramp. A large, tapered and blunt-tipped vertical stabilizer is used. Mounted on the vertical stabilizer, the horizontal stabilizer is equitapered, blunt-tipped, and has no dihedral. The Caribou can operate from extremely short landing fields, carrying 30-40 passengers or equivalent cargo loads, and is utilized by the U.S. Army under the designation AC-1.

DE HAVILLAND

CHIPMUNK



Mfr.	DE HAVILLAND	Max. Speed (Knots)	120
Wing Span	34'	Service Ceiling (Ft.)	17,200
Length	25'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	2,014	Model No.	Gypsy Major-8
Max. Range (Naut. Miles)	265	Mfr.	DE HAVILLAND
Crew No.	2	Rating Each	145 hp.



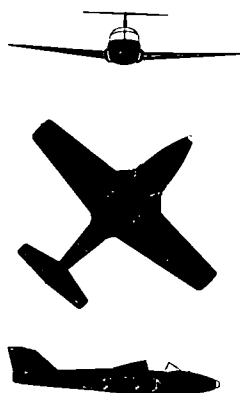
The Chipmunk DHC-1 is a low-wing, two-seat trainer. Designed and built by The Canadian subsidiary branch of de Havilland, this all-metal light trainer has a large, tapering wing with raked wing tips. The graceful fin and rudder are typical de Havilland, with the fin set just forward of the tapered stabilizer. Cockpit arrangement is tandem with a removable canopy, portions of which slide for access; dual controls are provided. A fixed two-wheel-type landing gear is fitted. The Chipmunk is presently in service in air forces of many nations all over the world, as well as in many civil aviation schools.

CL-41

CANADAIR



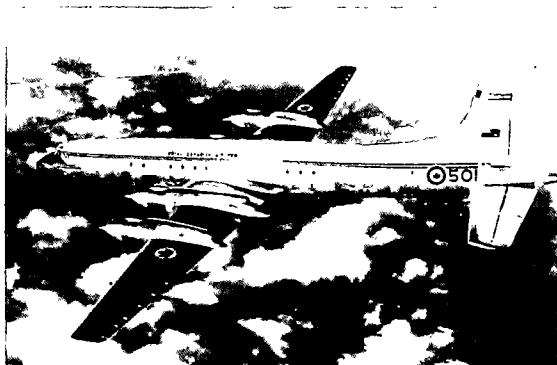
Mfr.	CANADAIR	Max. Speed (Knots)	400
Wing Span	36'	Service Ceiling (Ft.)	45,000
Length	32'	No. & Type of Engines	1 Turbojet
Combat Weight (Lbs.)	6,500	Model No.	JT-12A-2
Max. Range (Naut. Miles)	800	Mfr.	P & W
Crew No.	2	Rating Each	2,400 # s.t.



The CL-41 is a subsonic, low wing, two-seat jet trainer designed to meet pilot training requirements from basic to supersonic capability. Its straight wing is tapered and square tipped, with slight positive dihedral. Twin wing-root intakes feed the single jet engine mounted in the aft fuselage. Cigar-shaped, the fuselage has a side-by-side cockpit. The square-tipped horizontal stabilizer, mounted at the tip of the vertical stabilizer, is unequally backward tapered and has no dihedral. Short and deep, the vertical stabilizer is the only backswept surface of the design. Provision is made for light armament and external weapons.

CANADAIR

CL-44



Mfr.	CANADAIR	Max. Speed (Knots)	347
Wing Span	142'	Service Ceiling (Ft.)	30,000
Length	137'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	205,000	Model No.	TYNE Rty. 12 Mk. 515/10
Max. Range (Naut. Miles)	5,300	Mfr.	ROLLS ROYCE
Crew No.	4	Rating Each	5,730 eshp.



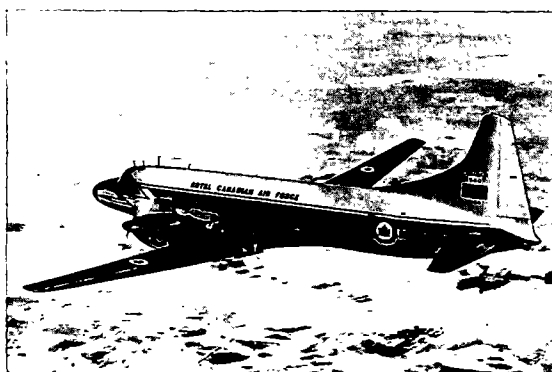
The CL-44 (RCAF designation CC-106) is a derivative of the Bristol Britannia and the Canadair Argus. Although this aircraft is built in three basic forms, the all-cargo version (CL-44G military model and CL-44D commercial model) is perhaps the most interesting as it features a hinged "swing tail" to permit end loading. The CL-44's straight wing is unequally backward tapered, has slight positive dihedral, and is blunt tipped. Wing mounting positions for the four turboprop engines follow the leading edge taper, making the nacelles appear staggered; the inboard nacelles are larger, to accommodate landing gear. Cigar-shaped, the fuselage features a stepped-up cockpit. The horizontal stabilizer is midmounted on the fuselage, has no dihedral, and is equitapered with blunt tips. Also blunt tipped, the tapered vertical stabilizer has a curved dorsal fairing at its forward root. The end-loading version of the CL-44 is hinged at the forward root of the vertical stabilizer. Side loading models are used by the RCAF, and the end-loading civil versions was purchased by some U.S. commercial air carriers.

CANADAIR

CL-66



Mfr.	CANADAIR	Max. Speed (Knots)	282
Wing Span	105'	Service Ceiling (Ft.)	20,000
Length	82'	No. & Type of Engines	2 Turboprop
Combat Weight (Lbs.)	53,200	Model No.	Napier Eland 6
Max. Range (Naut. Miles)	1,515	Mfr.	Napier ELAND
Crew No.		Rating Each	3,500 eshp.



The Canadair CL-66 (RCAF designation CC-109) is an all-Canadian development of the Convair 440, fitted with turboprop engines. The straight wing is backward tapered with a straight trailing edge, has slight positive dihedral, and is blunt-tipped. The two slim engines protrude well forward of the wing leading edges. Broken only by the stepped-up cockpit, the fuselage is basically cigar-shaped. Mid-mounted on the fuselage, the horizontal stabilizer is set with no dihedral, is equitapered, and rounded at the tips. The round-tipped vertical stabilizer is curved at the leading edge and tapered along the trailing edge. The CC-109 is currently used extensively by the RCAF as an all cargo aircraft.

OTTER

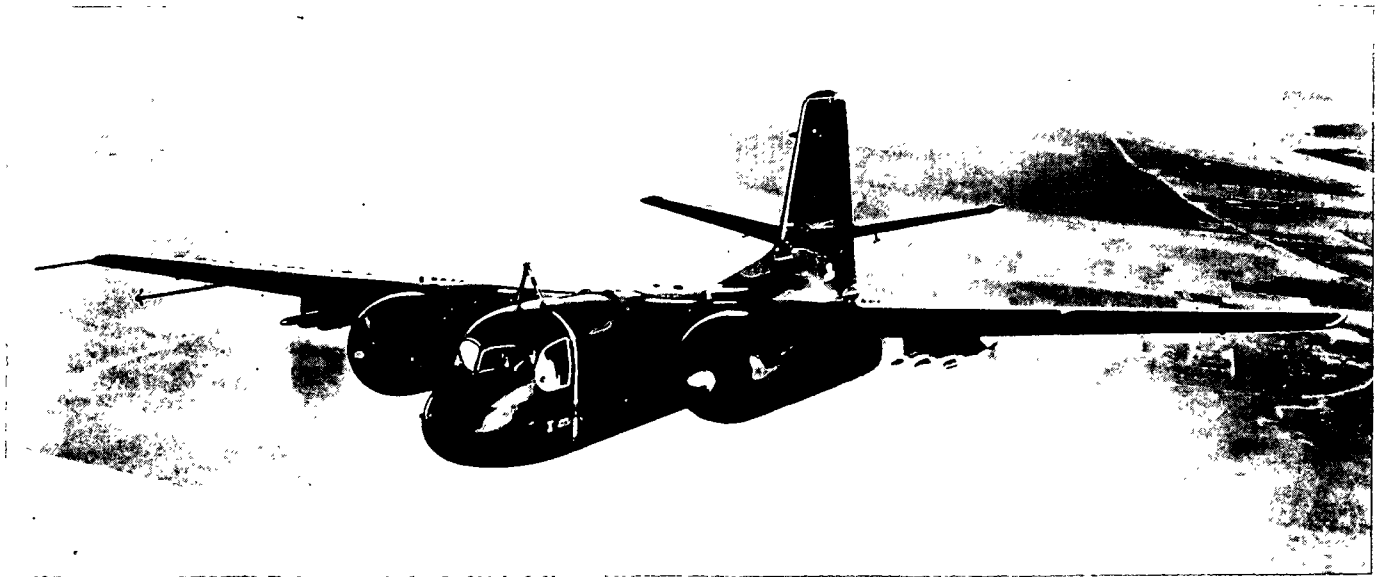
De HAVILLAND



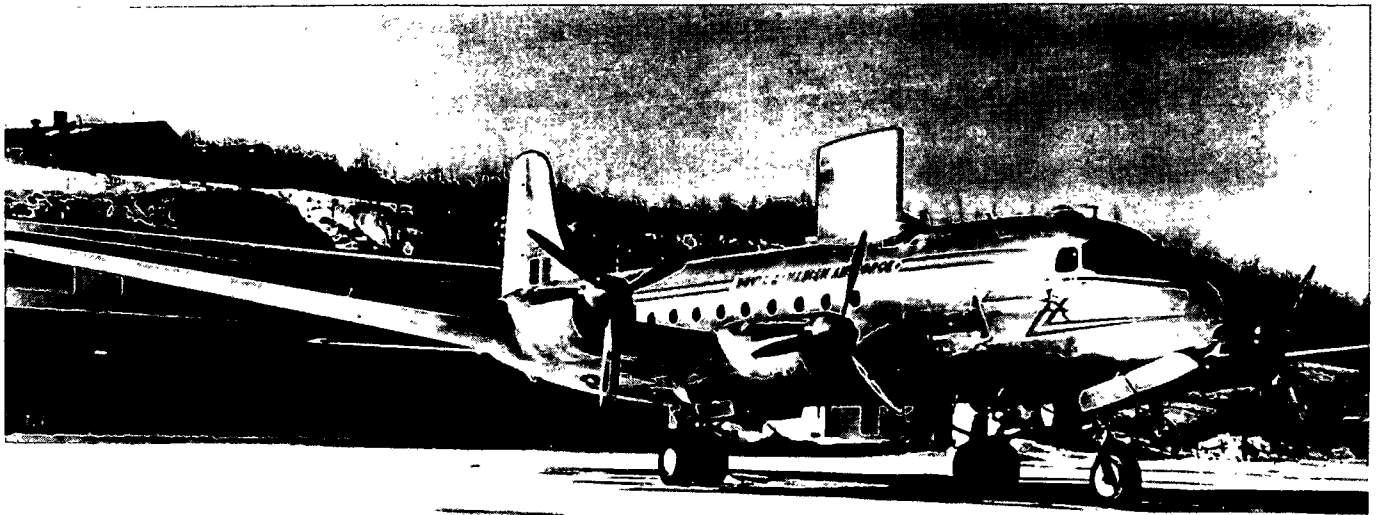
Mfr.	DE HAVILLAND	Max. Speed (Knots)	140
Wing Span	58'	Service Ceiling (Ft.)	14,700
Length	42'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	8,000	Model No.	R-1340-S1H1-G
Max. Range (Naut. Miles)	833	Mfr.	P & W
Crew No.	1 or 2	Rating Each	600 hp.



The de Havilland DHC-C Otter is a nine/eleven-passenger general utility transport powered by a single radial engine. Developed for Canadian conditions, it appears in landplane, seaplane, skiplane, wheel-skiplane, and amphibian versions. The high-braced wing is rectangular in shape with blunt raked tips and has slight positive dihedral. Small wing fences are used. The rectangular fuselage is of the single-nose-mounted-engine type. The rounded vertical stabilizer merges into the fuselage with a long dorsal fairing. The straight, equitapered horizontal stabilizer, mounted low on the vertical fin, is slotted at its aft root. The Otter has seen service in the air forces of Chile, Colombia, India, Indonesia, and Norway; in the U.S. Army and U.S. Navy it is designated, respectively, as U-1 and UC-1.



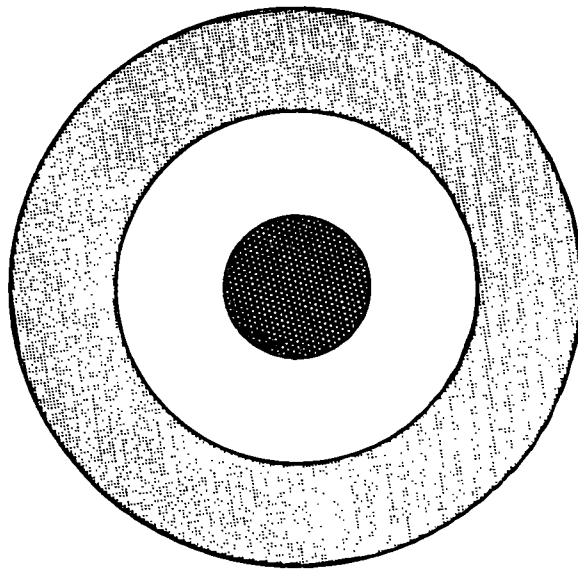
The CS2F is a Canadian-built version of the U.S. Navy antisubmarine S2F.



The NORTH STAR transport, relative of the DC-4/C-54, shown modified for airborne icing research.



FRANCE



FRANCE

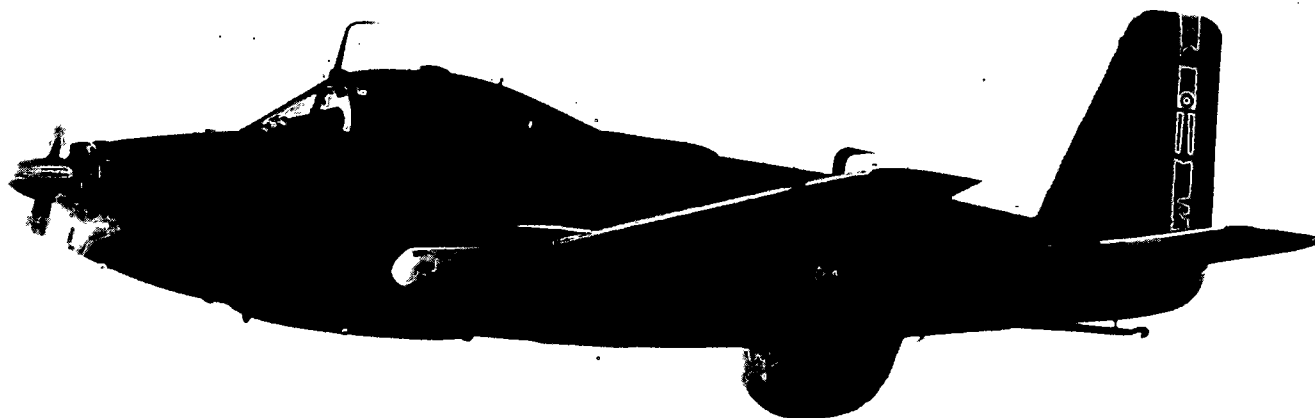
FRANCE

AIR FORCE (ARMÉE DE L'AIR)

Type	Designation	Manufacturer	Country
Light Bomber	B-26	Douglas	U.S.A.
	Canberra B. 6	English Electric	U.K.
Fighter	Vautour IIB	Sud	France
	F-47 Thunderbolt	Republic	U.S.A.
	F-84F Thunderstreak	Republic	U.S.A.
	F-86K Sabre	North American	U.S.A.
	F-100 Super Sabre	North American	U.S.A.
	Meteor NF.11	Gloster	U.K.
	Mirage III-C	Dassault	France
	Mistral (Vampire)	Sud (license)	France
	Mystère IVA	Dassault	France
	Ouragan	Dassault	France
	Super Mystère B2	Dassault	France
	Vautour IIA	Sud	France
	Vautour IIN	Sud	France
Reconnaissance	RF-84F Thunderflash	Republic	U.S.A.
Transport	Breguet 765 Sahara	Breguet	France
	C-47	Douglas	U.S.A.
	C-54	Douglas	U.S.A.
	HD-321	Hurel-Dubois	France
	Ju 52	Junkers	Germany
Trainer	Nord 2501 Noratlas	Nord	France
	SE. 161 Languedoc	Sud	France
	SO-30P Bretagne	Sud	France
	CM-170 Magister	Fouga	France
	Meteor T. 7	Gloster	U.K.
	Mirage III-B	Dassault	France
	MS. 472 Vanneau	Morane-Saulnier	France
	MS. 733 Alcyon	Morane-Saulnier	France
	MS. 760 Paris	Morane-Saulnier	France
	SIPA 12	SIPA	France
	T-6 Texan	North American	U.S.A.
	T-33	Lockheed	U.S.A.
	Vampire	de Havilland	U.K.
	SE. 3130 Alouette II	Sud	France
	H-13	Bell	U.S.A.
	H-19	Sikorsky	U.S.A.
	H-23B	Hiller	U.S.A.
Helicopter	H-34 (S-58)	Sud (license)	France
	S-51	Sikorsky	U.S.A.
	C-45	Beech	U.S.A.
	MD. 311/312/315 Flamant	Dassault	France
	MH. 1521 Broussard	Max Holste	France
Miscellaneous	MS. 500 Criquet	Morane-Saulnier	France
	NC 701/702	Nord-Centre	France
	Nord 1000/1001/1002	Nord	France
	Nord 1100/1101	Nord	France

NAVAL AIR ARM (AÉRONAUTIQUE NAVALE)

Type	Designation	Manufacturer	Country
ASW (Carrier-based)	Brequet 1050 Alizé	Brequet	France
ASW (Land-based)	TBM-3 Avenger	General Motors/Grumman	U.S.A.
	P2V-6 Neptune	Lockheed	U.S.A.
	P2V-7 Neptune	Lockheed	U.S.A.
	P4Y-2 Privateer	Convair	U.S.A.
	P5M-2 Marlin	Martin	U.S.A.
	Sunderland	Short	U.K.
Fighter	Aquilon 20 (Sea Venom)	Sud (license)	France
	Aquilon 202	Sud (license)	France
	Aquilon 203	Sud (license)	France
	Etendard IVM	Dassault	France
	F4U-7 Corsair	Chance-Vought	U.S.A.
Transport	C-47	Douglas	U.S.A.
	Ju 52	Junkers	Germany
	Lancaster	Avro	U.K.
	S.E.161 Languedoc	Sud	France
	SO-30P Bretagne	Sud	France
	York	Avro	U.K.
Trainer	Aquilon 204	Sud (license)	France
	CM-175 Zephyr	Fouga	France
	F6F-5 Hellcat	Grumman	U.S.A.
	MS.733 Alcyon	Morane-Saulnier	France
	Nord 2504	Nord	France
	SNB Navigator	Beech	U.S.A.
	SNJ Texan (T-6)	North American	U.S.A.
	SO-94/95	Sud	France
	SV-4C	Nord-Stampe	France
	Vampire T. 55	de Havilland	U.K.
Helicopter	SE.3130 Alouette II	Sud	France
	H-21	Vertol	U.S.A.
	H04S (S-55)	Sikorsky	U.S.A.
	HSS-1 (S-58)	Sud (license)	France
	HTL (Bell 47)	Bell	U.S.A.
	HUP-2	Vertol	U.S.A.
Miscellaneous	JRF-5 Goose	Grumman	U.S.A.
	MD.312 Flamant	Dassault	France
	MH.1521 Broussard	Max Holste	France
	MS.500 Criquet	Morane-Saulnier	France
	MS.760 Paris	Morane-Saulnier	France
	NC.701/702	Nord-Centre	France
	Nord 1002	Nord	France
	Nord 1101	Nord	France
	PV-2 Harpoon	Lockheed	U.S.A.

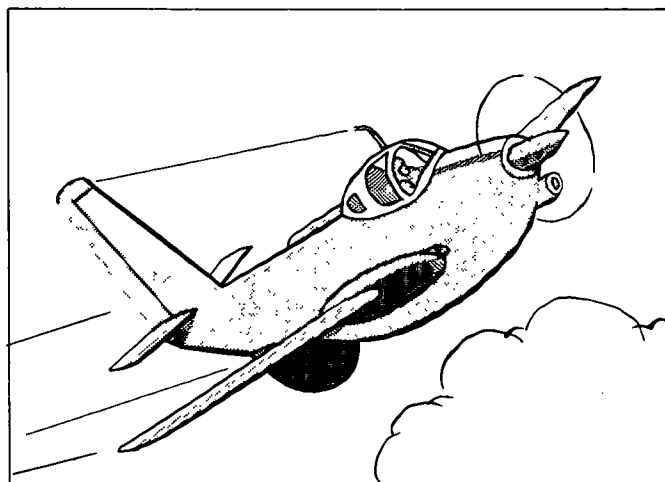
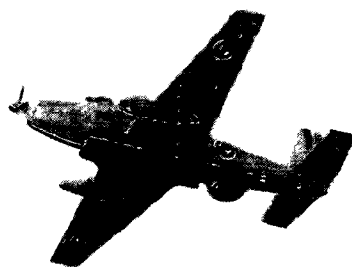
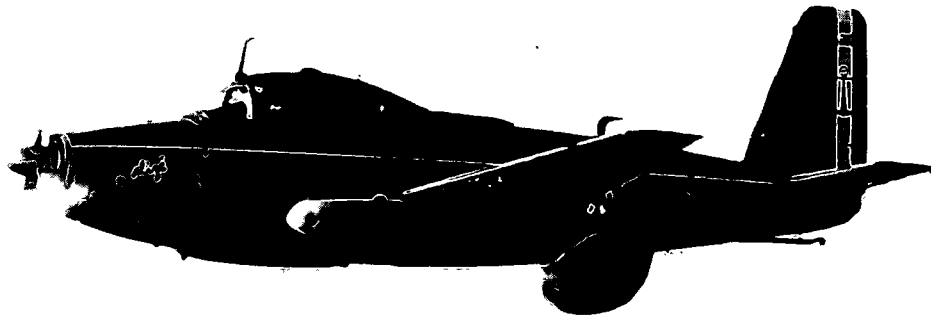


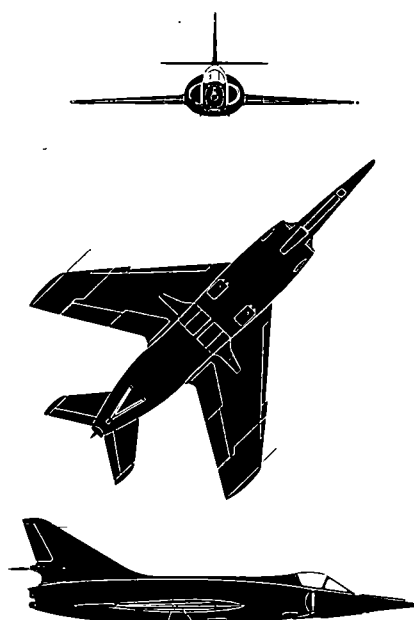
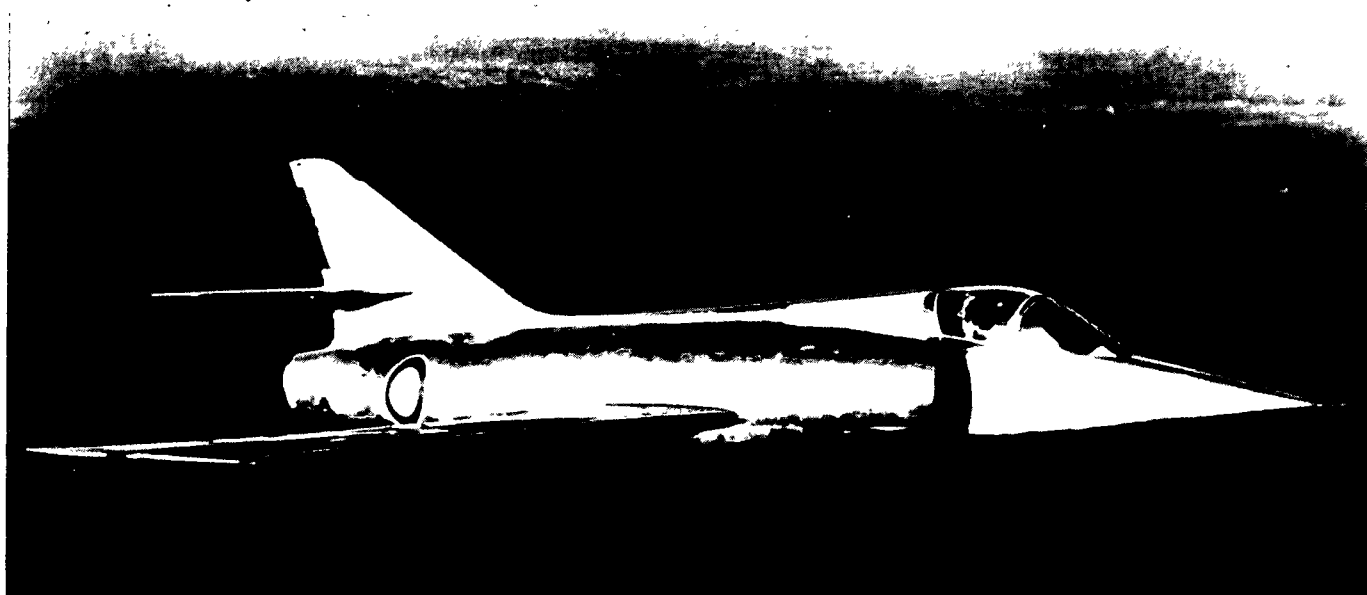
The Breguet 1050 Alizé is a three-seat, carrier-borne, antisubmarine search and strike aircraft. The low midmounted straight wing is unequally backward tapered, has squared off tips, and moderate positive dihedral. Combined wheel-housing/armament pods are mounted beneath the wing and protrude forward of the wing leading edge. The single turboprop engine has a small spinner. A partially enclosed cockpit canopy is mounted atop the fuselage. The fuselage tapers gently into a rounded tail cone. The straight midmounted horizontal stabilizer is equitapered and square tipped. The vertical stabilizer is backward tapered with a straight trailing edge and a square tip. A retractable "dust bin" radar is mounted in the lower aft fuselage. The Alizé carries bombs, torpedoes, and/or depth charges internally. Six 5-inch rockets or Matra air-to-surface missiles may be carried externally under the outer wing. Current (1961) production plans call for development of pilot and radar training models. The Alizé was also accepted for use by the Indian Navy, and first delivery was made in January 1961.

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	BREGUET	Max Range (Naut. Miles)	1,465	No. of Engines	1
Wing Span	51'	Crew No.	3	Model No.	Dart DA-21 or 22
Length	45'	Max. Speed (Knots)	250	Mfr.	ROLLS ROYCE
Combat Weight (Lbs.)	18,100	Service Ceiling (Ft)	20,000	Type	Turboprop
				Rating Each	1,975 eshp.

ALIZE

BREGUET

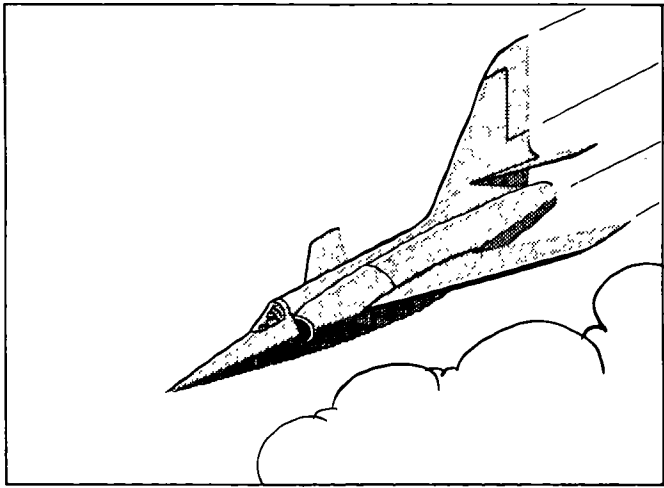
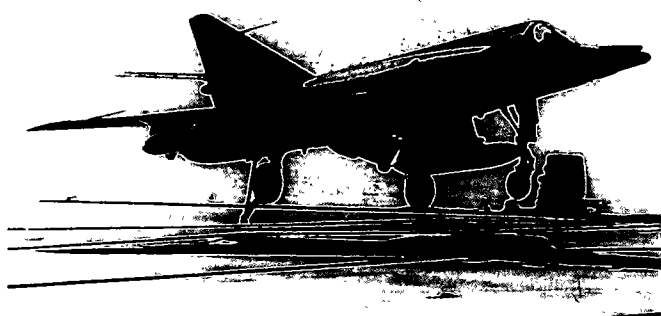
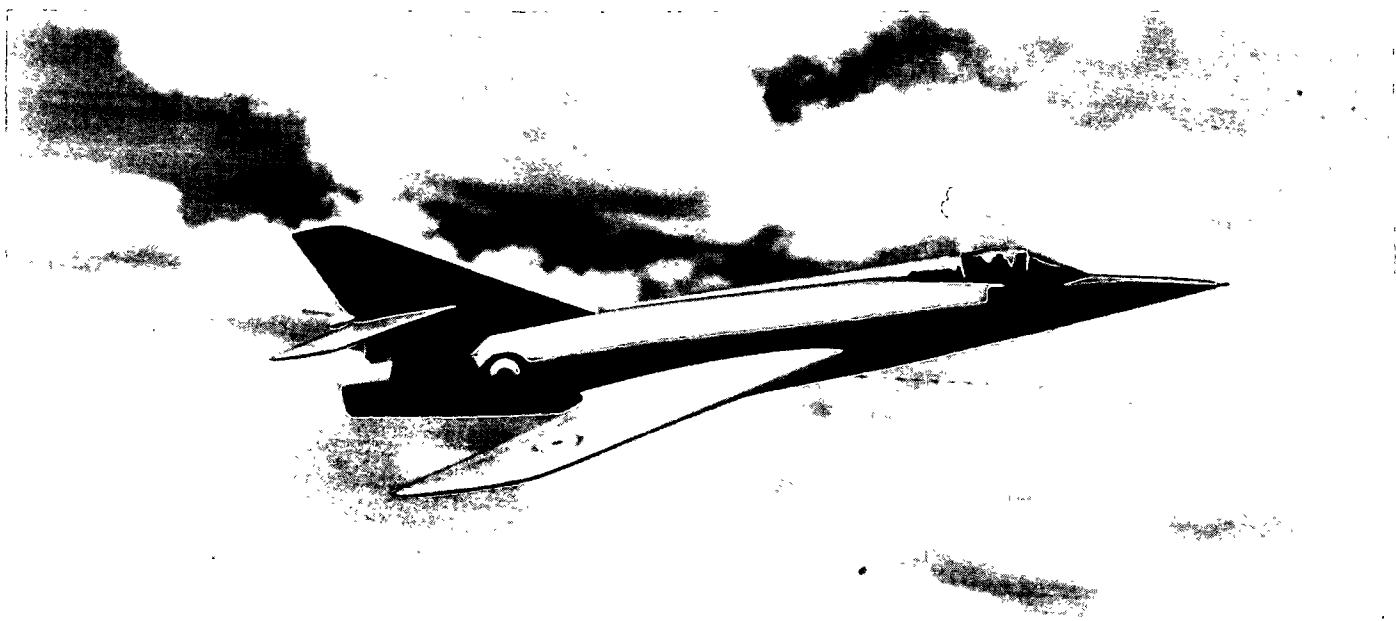


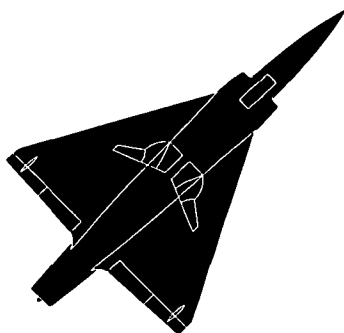
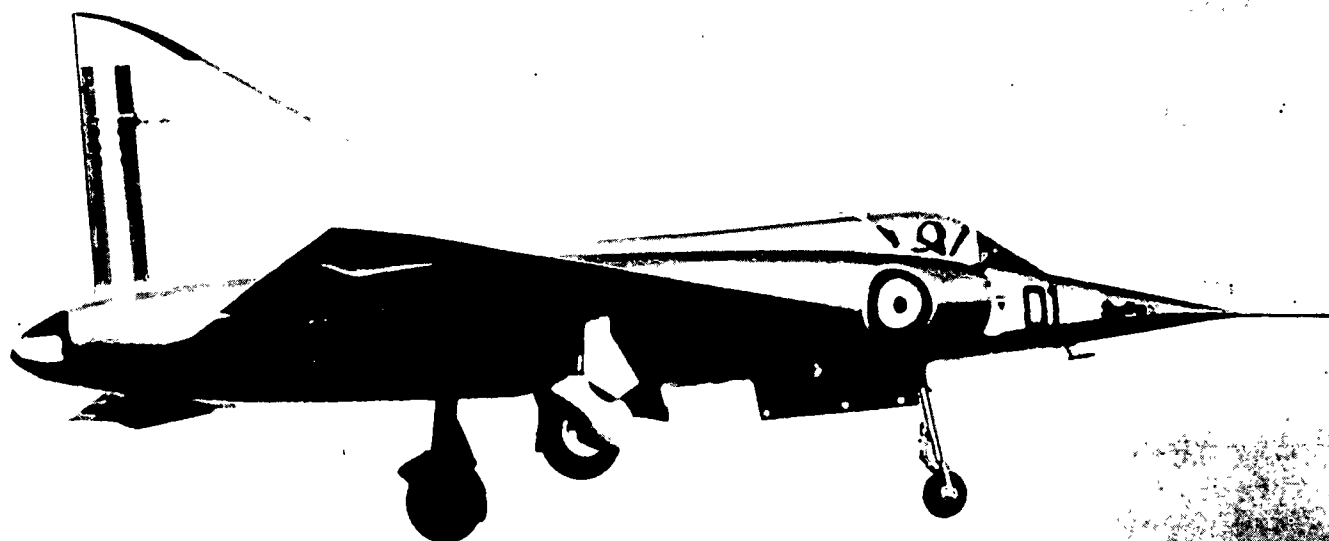


The Etendard IV-M is a single-seat, supersonic jet naval strike fighter developed from the land-based Etendard IV. While the latter aircraft, built to a French Air Force requirement, did not go into production, the French Naval Staff were so impressed with its qualities that they ordered the navalized IV-M into production for use with their latest aircraft carriers. The IV-M's wing is swept-back and tapered, has slight negative dihedral and blunt tips; it is further characterized by a "dog-tooth" leading edge. Leading-edge and high-lift extension flaps provide the additional lift required for carrier operations. The single turbojet engine is fed by twin inlets which flank the fuselage and merge into a single exhaust outlet at the tail. The forward fuselage consists of a sharp needle nose, housing a specially designed radar fire control system, and a low frontal arca cockpit. The area ruled fuselage thickens at the inlets, tapering slightly at the outlet. Vertical and horizontal stabilizers are sweptback and tapered, with blunt tips. The horizontal stabilizer is mounted near the base of the vertical stabilizer and is the all-moving type. Four underwing pylons can accommodate air-to-air or air-to-surface missiles, rocket packs, bombs, and/or fuel tanks. The Etendard IV-M has an inflight refueling capability featuring a retractable boom. A photo reconnaissance version, the IV-P, is designed with a special camera nose.

DATA APPLY TO ETENDARD IV-M

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DASSAULT	Mox. Range (Naut Miles)	1,680	No. of Engines	1
Wing Span	31'	Crew No.	1	Model No.	ATAR-8
Length	47'	Mox. Speed (Knots)	700	Mfr.	SNECMA
Combat Weight (Lbs.)	19,400	Service Ceiling (Ft.)	50,000	Type	Turbojet
				Rating Each	9,700 # s.t.





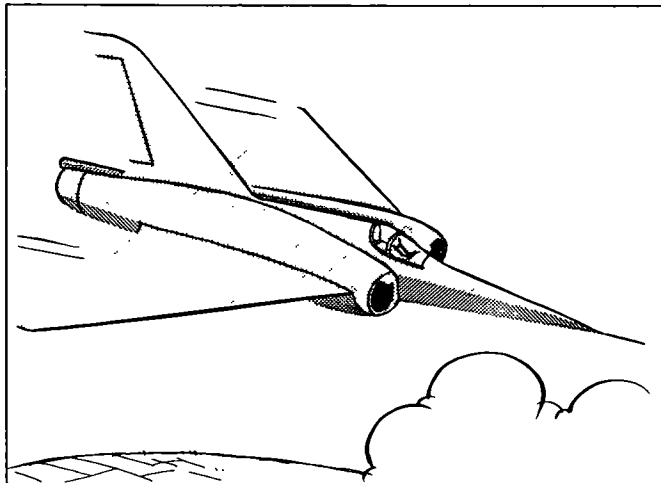
The Mirage III is an all-weather fighter/interceptor, intended eventually to be France's standard multi-purpose combat aircraft. Operating in the Mach 2 range, yet capable of landing and taking off from short, semiprepared runways, it has unique capabilities as a multiple weapon system. Its wing is a conically cambered delta utilizing trailing edge elevons. Twin intakes for the turbojet engine flank the fuselage. Additional power is provided, for combat acceleration, by a jettisonable under-fuselage-mounted liquid fuel rocket. The area ruled fuselage has a needle nose and low frontal area cockpit forward, and a long exhaust outlet extension aft. The vertical stabilizer is sweptback and tapers to a squared off tip. No horizontal stabilizer is used. External stores may include a Matra AAM carried on an under fuselage pylon, as well as air-to-surface missiles, sidewinders, rocket pods and/or drop tanks on two underwing racks. The first production version is the Mirage III-C, developed from the pre-series Mirage III-A. The III-B is a tandem two-seat trainer/combat version and the III-D a long-range intruder/reconnaissance variant. The Mirage III is also produced for export, and in 1961 was selected for use by the Swiss Air Force.

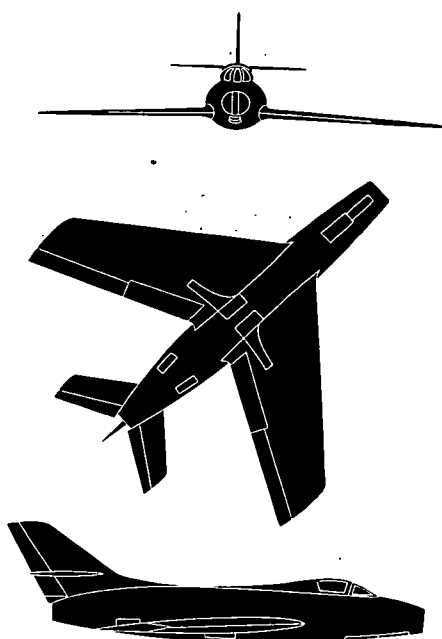
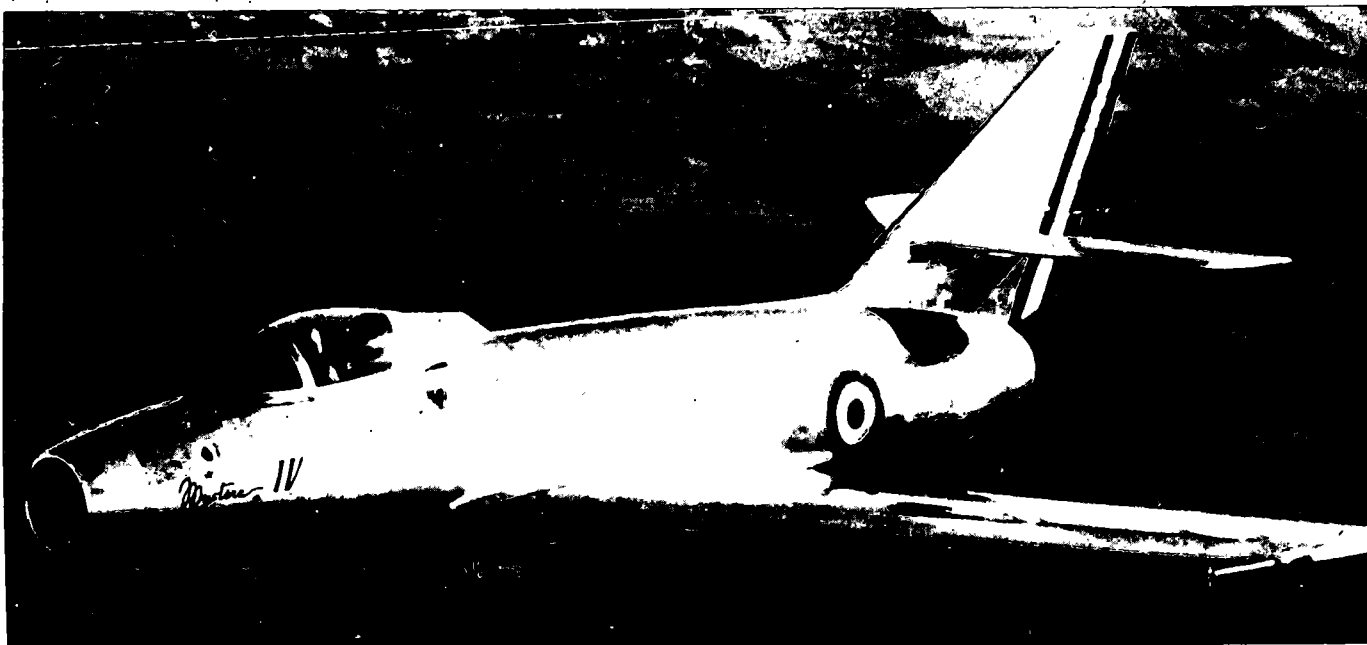
DATA APPLY TO MIRAGE III-A

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DASSAULT	Max. Range (Naut Miles)	270 (with no external fuel)	Na. of Engines	1
Wing Span	27'	Crew No.	1	Model No.	ATAR-9
Length	45'	Max. Speed (Knots)	1,250	Mfr.	SNECMA
Combat Weight (Lbs.)	17,600	Service Ceiling (Ft.)	82,000	Type	Turbojet
				Rating Each	13,225 # s.t.

MIRAGE III

DASSAULT

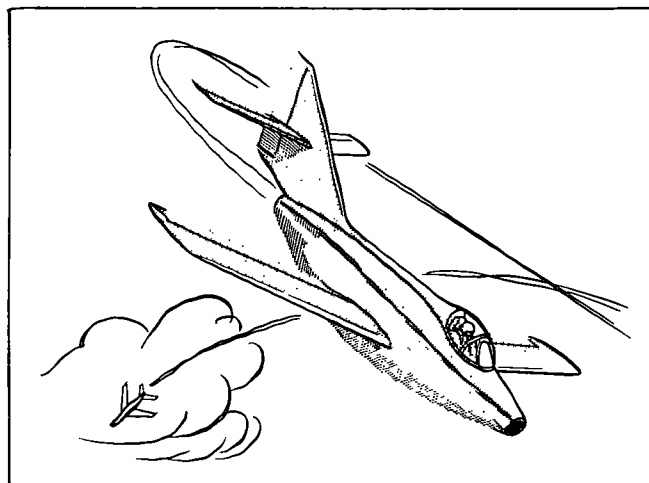
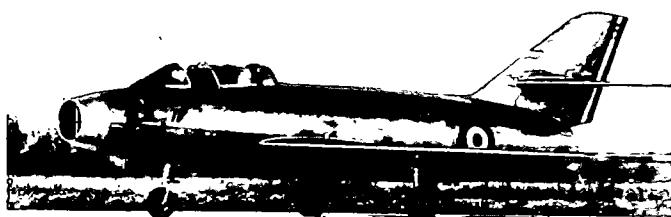
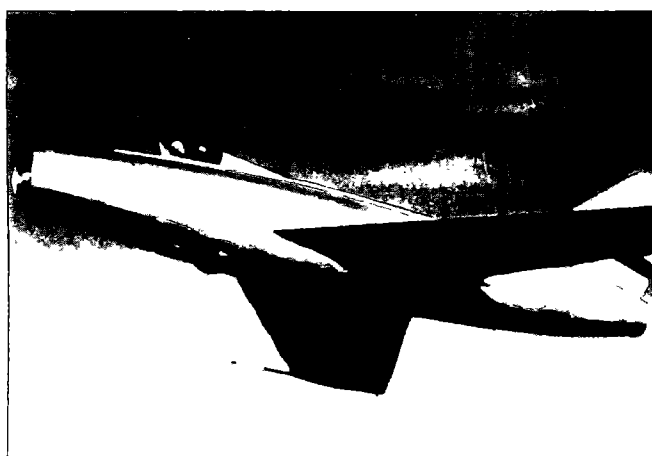
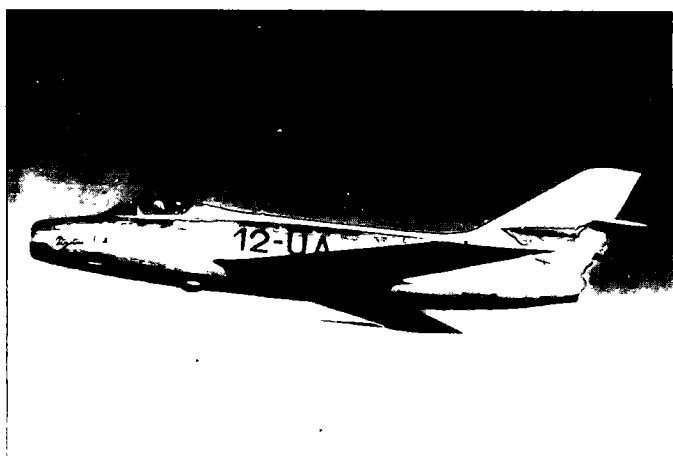


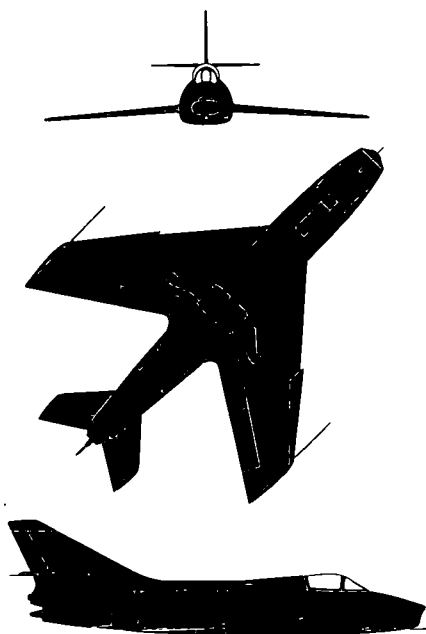


The Mystère IV (MD-452), basically a higher powered development of the earlier Mystère II, is a single-seat interceptor used by NATO, Israeli, and Indian units, as well as by the French Air Force. The airplane's low midmounted wing is sweptback, tapered, and blunt-tipped, with slight negative dihedral. The single jet engine is fed by a circular, squared-off air intake in the nose. A dorsal fairing extends from the cockpit to the sweptback, tapered, square-tipped vertical stabilizer. Also sweptback and tapered, the blunt-tipped, all-flying horizontal stabilizer is mounted low on the vertical stabilizer. Fixed armament consists of fuselage-mounted 30-mm cannon and a Matra automatic rocket magazine, containing 55 air-to-air rockets, located aft of the cannon installation in the fuselage. A variety of external stores including 500- or 1,000-pound bombs, Napalm containers, or air-to-ground rockets may be carried under the wings.

DATA APPLY TO MYSTÈRE IV-A

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DASSAULT	Max. Range (Naut. Miles)	700	No. of Engines	1
Wing Span	36'	Crew No.	1	Model No.	Verdun 350
Length	42'	Max. Speed (Knots)	600	Mfr.	HISPANO SUIZA
Combat Weight (Lbs.)	16,530	Service Ceiling (Ft.)		Type	Turbojet
				Rating Each	7,700 # s.t.





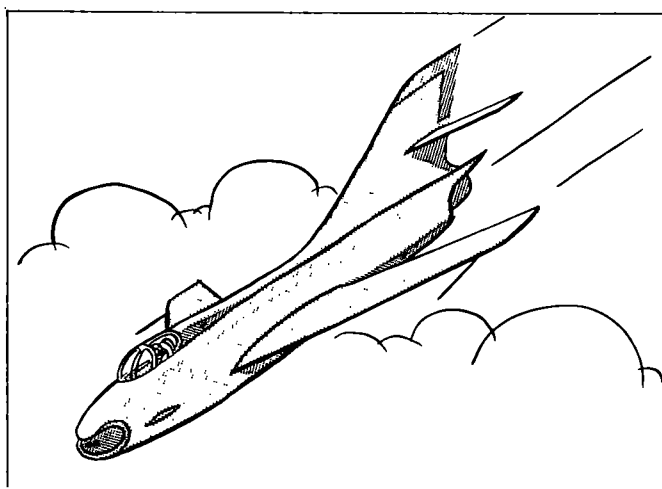
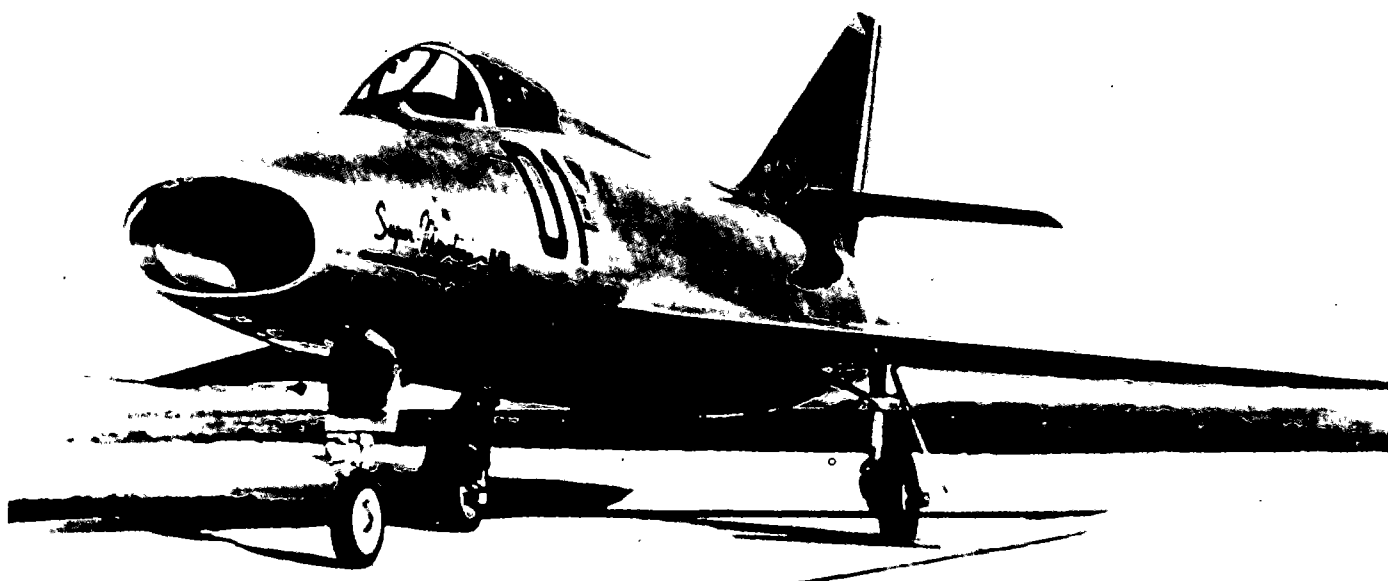
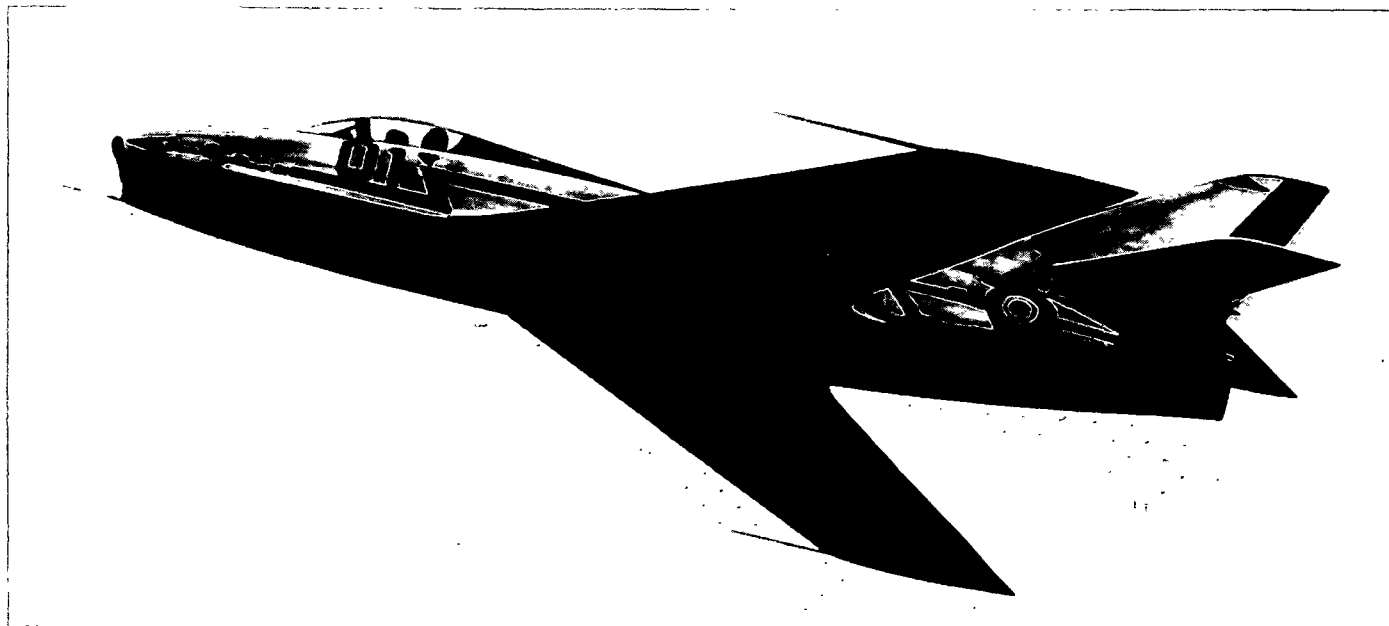
The Super Mystère, a further development of the Mystère IV, is a single-seat, single-engine jet interceptor and strike fighter. Its wing is sweptback and tapered, has slight negative dihedral, and is blunt tipped. The nose air inlet is elliptical in shape. Extending along the cigar-shaped fuselage, a dorsal fairing connects the bubble canopy and the vertical stabilizer. The all-flying horizontal stabilizer, mounted near the base of the sweptback, blunt-tipped vertical stabilizer, is also sweptback, blunt-tipped, and tapered. Fixed armament consists of two forward-fuselage-mounted cannon. Various external stores, such as bombs, rocket packs, napalm tanks, and air-to-air missiles, can be accommodated on two underwing racks.

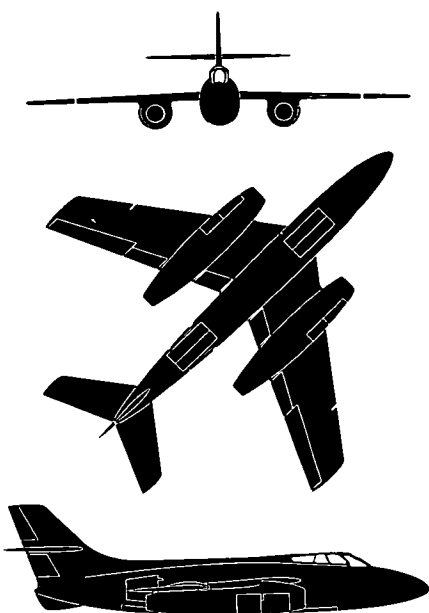
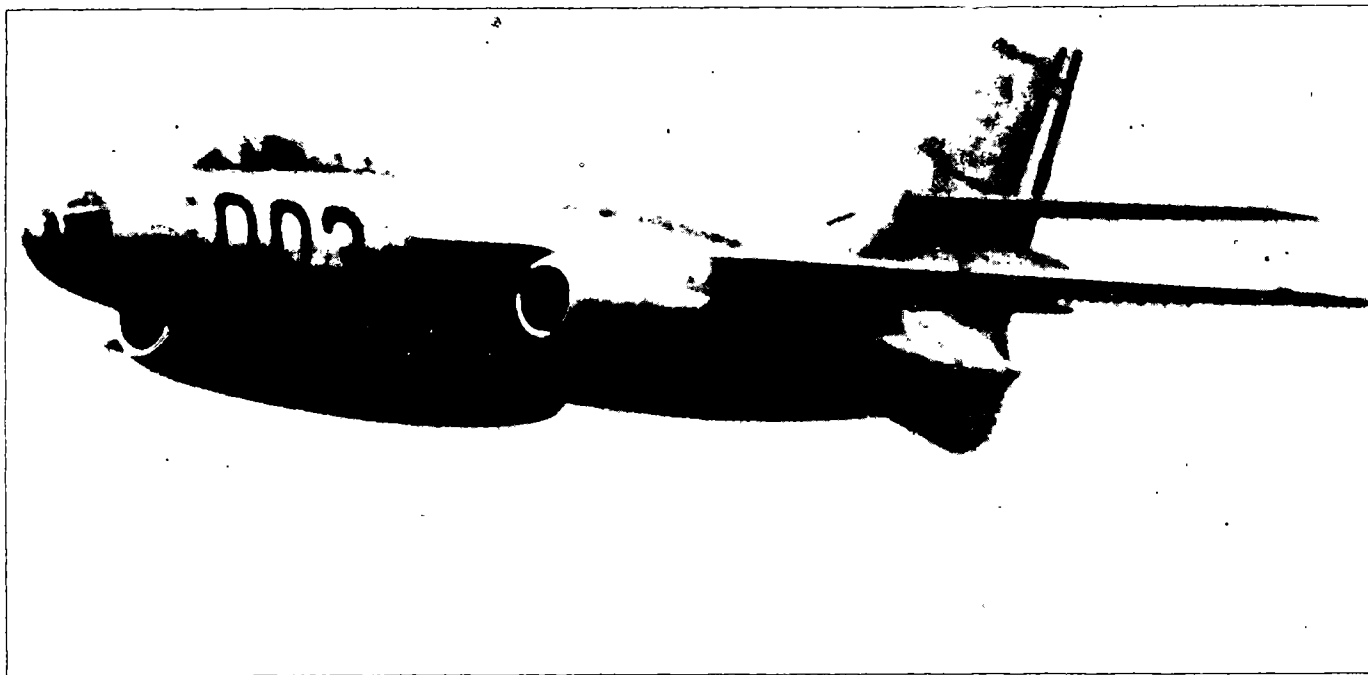
DATA APPLY TO SUPER MYSTÈRE B.2

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	DASSAULT	Max. Range (Naut. Miles)	520	No. of Engines	1
Wing Span	34'	Crew No	1	Model No.	ATAR-101G
Length	46'	Max Speed (Knots)	645	Mfr.	SNECMA
Combat Weight (Lbs.)	22,046	Service Ceiling (Ft.)	55,750	Type	Turbojet
				Rating Each	9,700 # s.t.

SUPER MYSTÈRE

DASSAULT

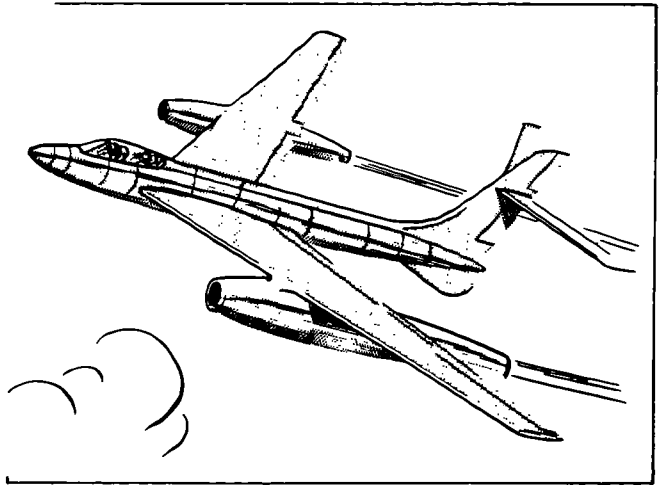
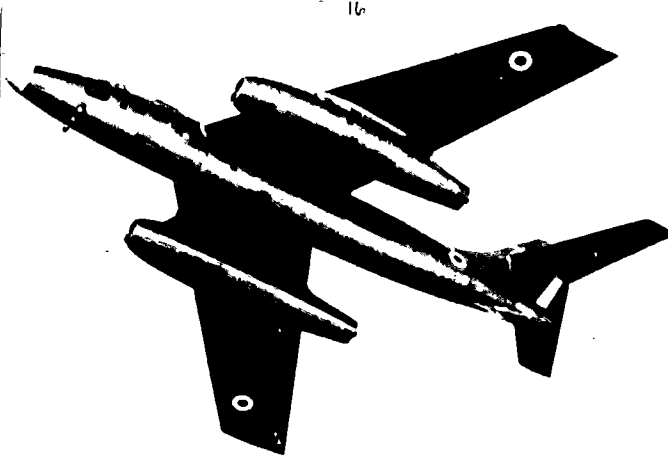




The Vautour (SO 4050) is a twin-engined, multi-role military jet. In different configurations, it is a single-seat fighter (II-A), a two-seat fighter interceptor (II-N), or a two-seat bomber (II-B, -BR). The wing is midmounted, sweptback, tapered, blunt-tipped, and has small wing fences outboard of the engines. The nacelles of the underwing-mounted engines protrude forward and extend aft of the wing. The nose of the cigar-shaped fuselage may be solid as in the fighter versions, or glassed-in as featured in the bomber. A dorsal fairing runs along the fuselage top from the bubble canopy to the backswept, blunt-tipped vertical stabilizer. An all-flying type horizontal stabilizer (sweptback, tapered, and blunt-tipped) is midmounted on the vertical stabilizer. There is a small central fin under the tail section. Fixed armament is dependent upon the version. External arms and droppable fuel tanks can be used with all versions. Some two-seat bomber Vautours were supplied to the Israeli Air Force.

DATA APPLY TO VAUTOUR II-N

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr	SUD	Max. Range (Naut. Miles)	2,160	No. of Engines	2
Wing Span	50'	Crew No.	2	Model No.	ATAR 101-E3
Length	50'	Max. Speed (Knots)	590	Mfr.	SNECMA
Combat Weight (Lbs.)	44,000	Service Ceiling (Ft.)	49,200	Type	Turbojet
				Rating Each	7,700 # s.t.



BREGUET

INTEGRAL



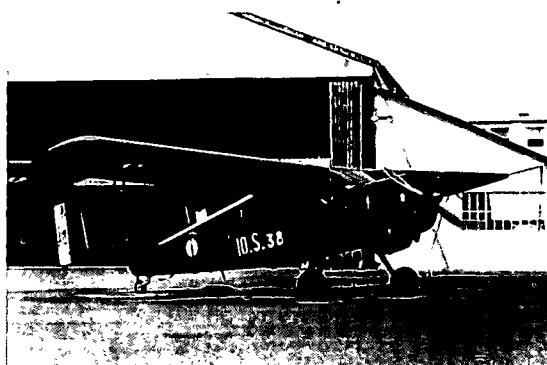
DATA APPLY TO BREGUET 941

Mfr.	BREGUET	Max. Speed (Knots)	220
Wing Span	76'	Service Ceiling (Ft.)	
Length	71'	No. & Type of Engines	4 Turboprop
Combat Weight (Lbs.)	44,000	Model No.	Gnome
Max. Range (Naut. Miles)		Mfr.	DE HAVILLAND
Crew No.		Rating Each	

The Breguet 941 Intégral is a STOL aircraft incorporating a deflected slipstream (blown wing) system. The slipstream from the four turbine engines blows over the entire span of the wing; the trailing edge is amply provided with slotted flaps and ailerons. The aircraft's four engines are interconnected to ensure rotation of all propellers even though one or more engines should fail. The high, straight wing is forward tapered with a straight leading edge, slight positive dihedral, and blunt tips. The engines are widely spaced, with the outboard engines uncommonly near the wing tips. The large, slightly rectangular fuselage has a stepped up cockpit and tapers upward toward the tail. There are landing gear nacelles mounted low at mid fuselage. A single backward-tapered vertical stabilizer with straight trailing edge and an unequally backward tapered horizontal stabilizer with no dihedral comprise the tail unit. Both stabilizers are blunt tipped. Developed from the earlier and smaller Type 940 Intégral, the Type 941 differs in appearance mostly in the tail unit; the 940 had a twin fin and rudder. A later development, the Breguet 945, may become the production version. The 945 has only two engines, but drives four propellers; otherwise its overall appearance is similar to that of the Type 941.

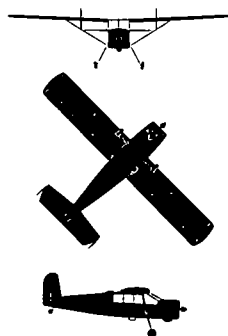
MAX HOLSTE

BROUSSARD



DATA APPLY TO BROUSSARD MH 1521

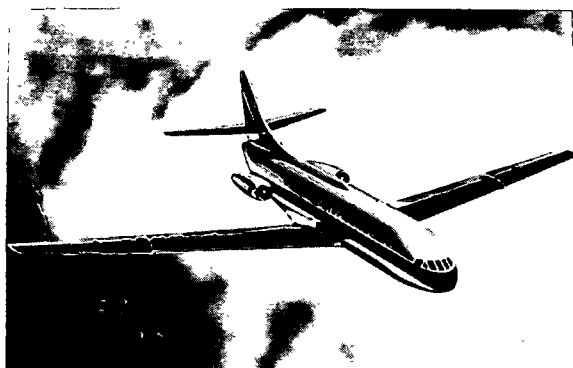
Mfr	MAX HOLSTE	Max. Speed (Knots)	142
Wing Span	45'	Service Ceiling (Ft.)	
Length	28'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	5,953	Model No.	R-985
Max. Range (Naut. Miles)	645	Mfr.	P & W
Crew No.	1	Rating Each	450 hp.



The Broussard (MH 1521, 22) six-seat single-radial-engined general utility aircraft is used extensively throughout the French armed forces and is also produced in a civil version. The high, rectangular, blunt-tipped wing has slight positive dihedral and is rigidly braced. The tail wheel and spring-steel main landing gear are non-retractable. Twin round-tipped vertical stabilizers are mounted at each end of the rectangular horizontal stabilizer. Broussards with the four rear seats removed were used for casualty evacuation in Algeria, and the aircraft was also delivered in quantity to the West German Air Force.

CARAVELLE

SUD



DATA APPLY TO CARAVELLE S.E. 210, MK. 3

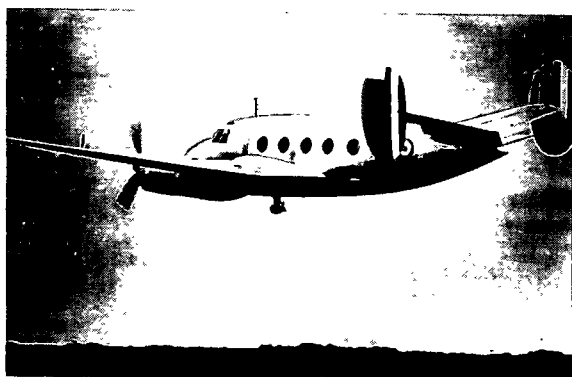
Mfr.	SUD	Max. Speed (Knots)	470
Wing Span	113'	Service Ceiling (Ft.)	40,000
Length	105'	No. & Type of Engines	2 Turbojet
Combat Weight (Lbs.)	103,616	Model No.	Avon RA-29/3 Mk. 527
Max. Range (Naut. Miles)	2,060	Mfr.	ROLLS ROYCE
Crew No.	3	Rating Each	10,500 # s.t.



The Caravelle (S.E. 210) twin-jet short-to-medium range airliner, with its engines mounted on the rear fuselage, opened a new era of aircraft construction. The low-mounted wing is blunt-tipped, sweptback and tapered, and has slight positive dihedral. Two wing fences are mounted near each wing tip. The two midmounted engines flank the rear fuselage. Basically cigar-shaped, the fuselage has a flush crew compartment forward and tapers unequally at the rear. A dorsal fairing runs from approximately amidship and merges with the curved leading edge of the sweptback and tapered vertical stabilizer. The sweptback and tapered horizontal stabilizer has no dihedral, and is mounted on the vertical stabilizer above the fuselage. The Caravelle was adopted by civil airlines for use throughout the world.

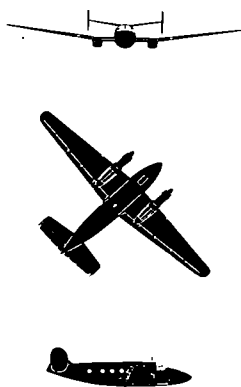
FLAMANT

DASSAULT



DATA APPLY TO FLAMANT MD-315

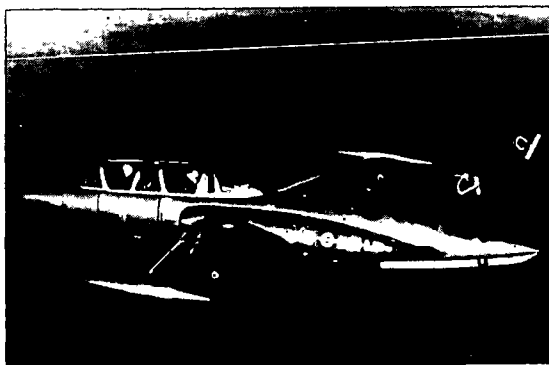
Mfr.	DASSAULT	Max. Speed (Knots)	205
Wing Span	68'	Service Ceiling (Ft.)	26,240
Length	41'	No. & Type of Engines	2 Piston
Combat Weight (Lbs.)	12,760	Model No.	12S-02-201
Max. Range (Naut. Miles)	645	Mfr.	SNECMA
Crew No.	2	Rating Each	580 hp.



The Flamant (MD-315) is a ten-seat, light military liaison/transport powered by twin in-line piston engines. The low midmounted wing is equitapered and round tipped. Outboard of the center section, the wing has moderate positive dihedral. Combined engine/wheel housing nacelles are mounted outboard of the fuselage and protrude well forward of the wing leading edge. The fuselage is pointed at the nose, has a stepped up cockpit and tapers moderately upward at the rear. The high-mounted horizontal stabilizer is tapered slightly and has moderate positive dihedral. Twin oval-shaped vertical stabilizers complete the tail unit. A bombing and navigational version (MD-311) and a six-seat version (MD-312) were also produced in quantity.

FOUGA

MAGISTER



DATA APPLY TO CM-170R

Mfr.	POTEZ-AIR FOUGA	Max. Speed (Knots)	382
Wing Span	40'	Service Ceiling (Ft.)	35,000
Length	33'	No. & Type of Engines	2 Turbojet
Combat Weight (Lbs.)	6,835	Model No.	Marbore IIA
Max. Range (Naut. Miles)	500	Mfr.	TURBOMECA
Crew No.	2	Rating Each	880 # s.t.



The CM-170 Magister is a two-seat jet fighter trainer. Its straight midmounted wing is backward-tapered, and has a straight trailing edge. A small droppable fuel tank is carried at each wing tip. Twin jet engines are mounted at the wing roots, their nacelles extending well back along the fuselage. A tandem cockpit is mounted on the long slender fuselage, which sharpens fore and aft. The tail unit is of the butterfly type; its two surfaces are backward tapered with straight trailing edge, and are square tipped. Two machine guns are mounted in the nose, and racks for air-to-ground rockets or bombs are fitted under each wing. A naval version, the CM-175 Zephyr, is modified slightly to enable carrier operation. West Germany, Israel, and Finland have built the Magister under license, and several NATO countries employ the aircraft for fighter pilot training.

DASSAULT

MIRAGE IV



Mfr.	DASSAULT	Max. Speed (Knots)	1,260
Wing Span	37'	Service Ceiling (Ft.)	70,000 approx.
Length	67'	No. & Type of Engines	2 Turbojet
Combat Weight (Lbs.)	105,800	Model No.	ATAR-9D
Max. Range (Naut. Miles)	1,390	Mfr.	SNECMA
Crew No.	2	Rating Each	13,225 # s.t.

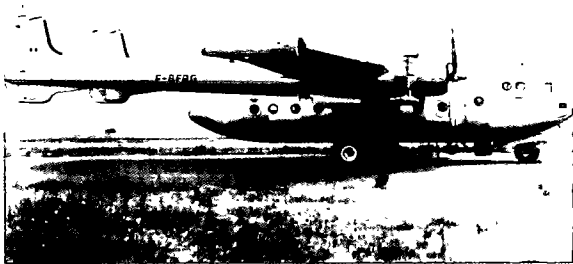


The Mirage IV is a delta-wing bomber developed to carry the French nuclear bomb at speeds near Mach 2. Basically, it is a scaled-up Mirage III fighter. The low-mounted delta wing is conically cambered. Side air intakes, aft of the cockpit at the wing root, feed the two jet engines within the area ruled fuselage. The forward fuselage is sharply pointed. The engine exhaust outlets extend well aft of the wing trailing edge and the vertical stabilizer. No horizontal stabilizer is used. The tall vertical stabilizer is sweptback and unequally backward tapered. Production versions will have an in-flight refueling capability, and will utilize advanced electronic navigation and bombing equipment.

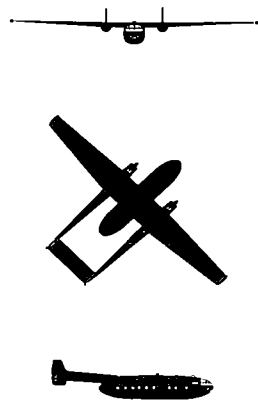
NORATLAS

NORD

DATA APPLY TO NORD 2501



Mfr.	NORD	Max. Speed (Knots)	240
Wing Span	107'	Service Ceiling (Ft.)	24,600
Length	72'	No. & Type of Engines	2 Turboprop
Combat Weight (Lbs.)	50,705	Model No.	Hercules
Max. Range (Naut. Miles)	1,350	Mfr.	SNECMA
Crew No.	3-4	Rating Each	2,040 eshp.



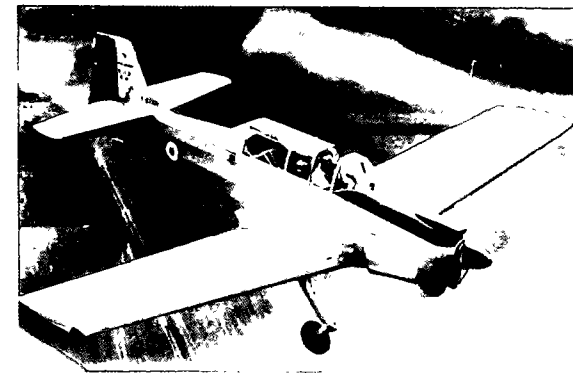
The Nord 2501 Noratlas and subsequent models (-02, -04, -06, -07, -08) are twin-engined, high-winged, twin-boom military and civil transports. The straight wing is unequally forward-tapered and blunt-tipped. Twin radial engines, one mounted at the head of each boom, power all versions. The later versions gain additional power from wingtip-mounted jets. Pod-like, the central fuselage is pointed fore and aft; cargo versions have clam shell doors at the rear. A rectangular horizontal tailplane connects the booms. The blunt-tipped and tapered vertical stabilizers have long dorsal fairings and extend below the booms. Two hundred Noratlas transports were ordered for French military units. In addition, approximately 50 of the civil version were ordered by French and foreign airlines. The Nord 2501 is built under contract in Germany for the West German Air Force and in an export version has been supplied to the Israeli Air Force.

3202

NORD

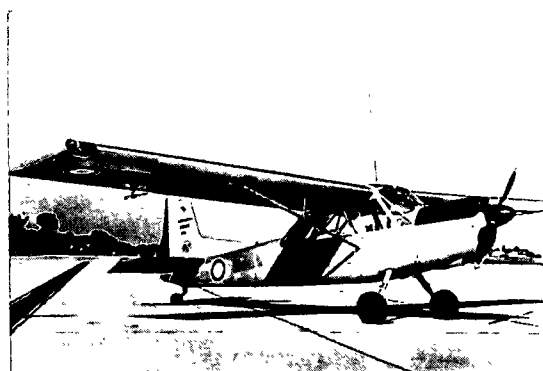
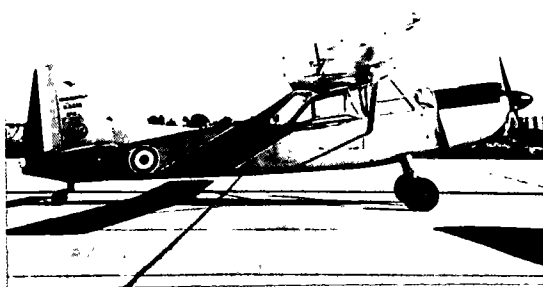


Mfr.	NORD	Max. Speed (Knots)	140
Wing Span	31'	Service Ceiling (Ft.)	4,265 (cruise alt.)
Length	27'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	2,690	Model No.	4D.32
Max. Range (Naut. Miles)	538	Mfr.	POTEZ
Crew No.	2	Rating Each	240 hp.



The Nord 3202 is a low-wing, single-engined primary trainer, intended to replace the Stampe SV-4 biplane basic trainer. Its square-tipped wing, almost rectangular in shape, has a slight forward taper along the leading edge. Pneumatic legs are used with the fixed landing gear. Seating is arranged in tandem in the glass-enclosed cockpit. Fuselage shape is typical of light aircraft. The horizontal stabilizer is mounted at the vertical stabilizer root and has no dihedral; square-tipped, it tapers slightly along the leading and trailing edges. The vertical stabilizer is unequally backward tapered, square-tipped, and has a small dorsal fairing at the forward root. No provisions are made for armament.

NORD



Mfr.	NORD	Max. Speed (Knots)	140
Wing Span	43'	Service Ceiling (Ft.)	
Length	28'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	2,976	Model No.	4D.34
Max. Range (Naut. Miles)	538	Mfr.	POTEZ
Crew No.	2-3	Rating Each	260 hp.

The Nord 3400 was the winner of a French design competition for a light, artillery observation aircraft. Its high-braced wing and the extensive use of flaps allow exceptionally short takeoff and landing runs. The straight wing is rectangular and blunt-tipped without dihedral. A single nose-mounted in-line engine with large spinner provides power. Partially fabric covered, the fuselage is of the general light-liaison type. Fixed landing gear are mounted. The tandem arranged cabin is completely glass enclosed; cabin side windows are bulged to allow almost vertical viewing from the 360° rotating observer's seat. A rectangular, blunt-tipped horizontal stabilizer with no dihedral, and an equitapered, blunt-tipped vertical stabilizer make up the tail section. In the production model, there is a large fairing at the forward root of the vertical stabilizer.

MORANE-SAULNIER



PARIS

Mfr.	MORANE-SAULNIER	Max. Speed (Knots)	352
Wing Span	33'	Service Ceiling (Ft.)	32,800
Length	33'	No. & Type of Engines	2 Turbojet
Combat Weight (Lbs.)	7,435	Model No.	Marbore II
Max. Range (Naut. Miles)	810	Mfr.	TURBOMECA
Crew No.	2	Rating Each	880 #

The Paris (M.S. 760) is a four-seat liaison aircraft or two-seat jet trainer. Its twin jet engines, mounted in the sides of the fuselage, exhaust midway between the wing and the tail unit. The straight, low mid-wing has slight positive dihedral, and is equitapered outboard of the triangular shaped wing root engine inlets. Auxiliary droppable fuel tanks can be mounted on the wingtips. A large area glass canopy covers the cockpit. Moderately pointed at the nose, the fuselage tapers upward at the rear. A T-type tail is used. The sweptback vertical stabilizer fairs into the fuselage at its forward root, with a straight, no dihedral, tapered horizontal stabilizer. Provision for underwing armament racks and fuselage-mounted machine guns allow weapons training. Armed versions of the Paris have been assembled in Argentina, and civil models assembled and distributed by Beech Aircraft Corporation in the United States.

SPIRALE

DASSAULT



Mfr.	DASSAULT	Max. Speed (Knots)	280
Wing Span	54'	Service Ceiling (Ft.)	36,100
Length	43'	No. & Type of Engines	2 Turboprop
Cambot Weight (Lbs.)	13,000	Model No.	Bastan
Max. Range (Naut. Miles)	1,350	Mfr.	TURBOMECA
Crew No.	2	Rating Each	935 eshp.

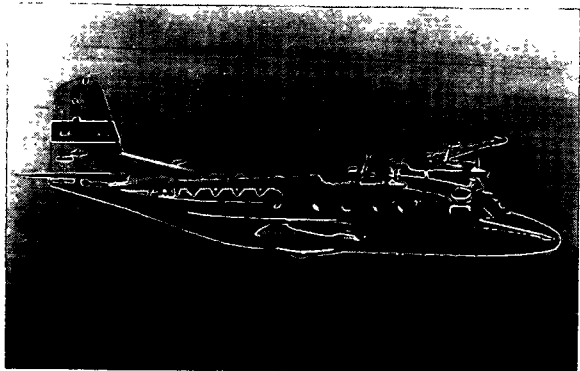


The Spirale (M.D. 410) is a multipurpose, turboprop aircraft developed jointly by Dassault and Sud. The low mid-mounted, slightly backswept and tapered wing is blunt-tipped and has two positive dihedral angles (slightly more dihedral at tips than inboard). The twin turboprop engine nacelles extend forward of the wing leading edge. The fuselage has a glassed-in nose and large-glassed-area, stepped-up cockpit. An extremely large, sweptback and tapered, blunt-tipped vertical stabilizer is the most characteristic recognition feature. The horizontal stabilizer, also sweptback, tapered, and blunt-tipped, has slight positive dihedral and is mounted low on the vertical stabilizer. Large air brakes are mounted in the rear fuselage. Small under-fuselage ventral fairings can house cannon. In addition, various combinations of under-wing rocket launchers and bombs may be carried. The Communauté (M.D. 415) is an eight passenger civil development of the Spirale.

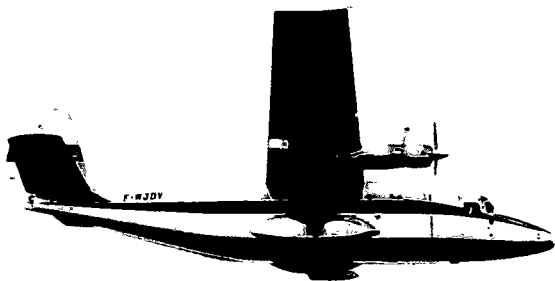
SUPER BROUSSARD

MAX HOLSTE/NORD

DATA APPLY TO SUPER BROUSSARD M.H. 260



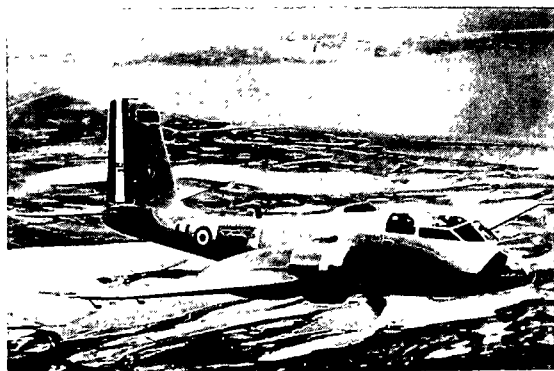
Mfr.	MAX HOLSTE	Max. Speed (Knots)	200
Wing Span	72'	Service Ceiling (Ft.)	9,842
Length	58'	No. & Type of Engines	2 Turboprop
Cambot Weight (Lbs.)	21,165	Model No.	Bastan
Max. Range (Naut. Miles)	755	Mfr.	TURBOMECA
Crew No.	2	Rating Each	957 eshp.



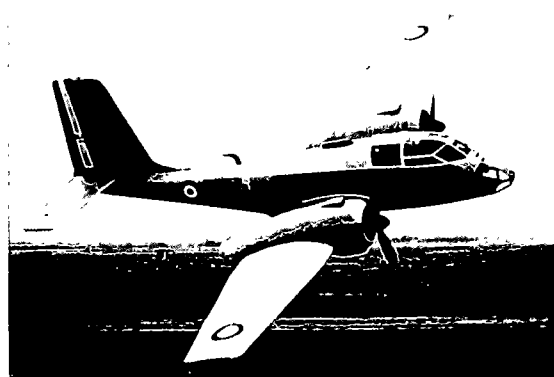
Evolving from the M.H. 250 radial-engined version, the M.H. 260 twin-turboprop engined Super Broussard light transport was designed after a careful survey of short field transport requirements. The design features a high-mounted wing with slight positive dihedral, equitapered edges, and squared off tips. Slim turoboprop engines protrude well forward of the wing leading edge. The fuselage is pointed at the nose, has a stepped-up cockpit, and tapers upward toward the tail. Slightly tapered at the leading and trailing edges, the high-mounted horizontal stabilizer is blunt tipped. The unequally backward-tapered vertical stabilizer has a triangular dorsal fairing at its forward root, and a slightly rounded blunt tip. A larger engined Super Broussard, the M.H. 280, is being developed.

SUD**VOLTIGEUR**

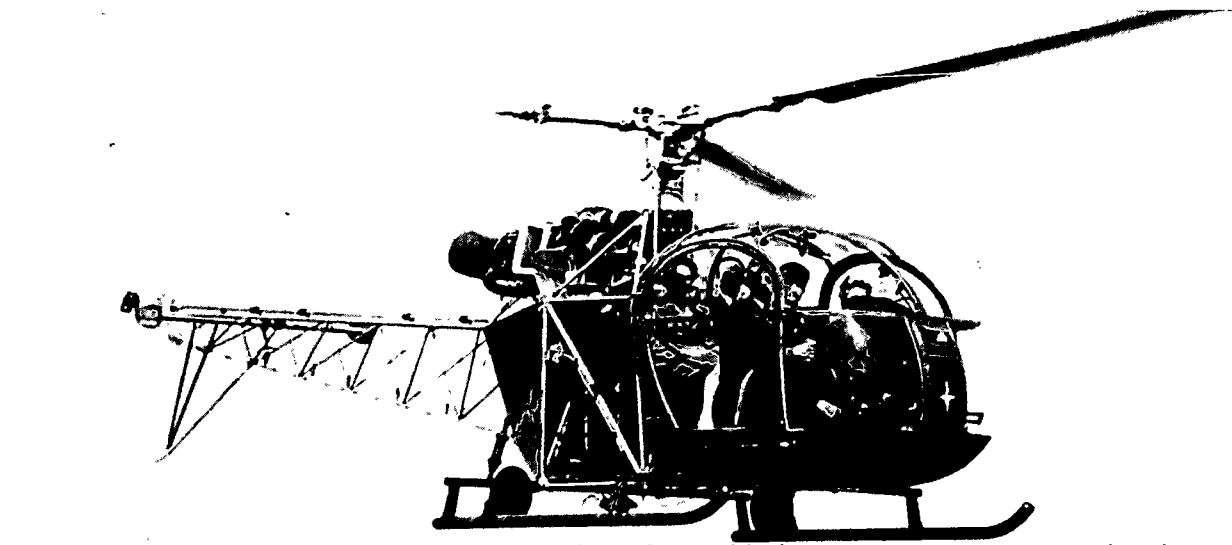
DATA APPLY TO S.E. 117



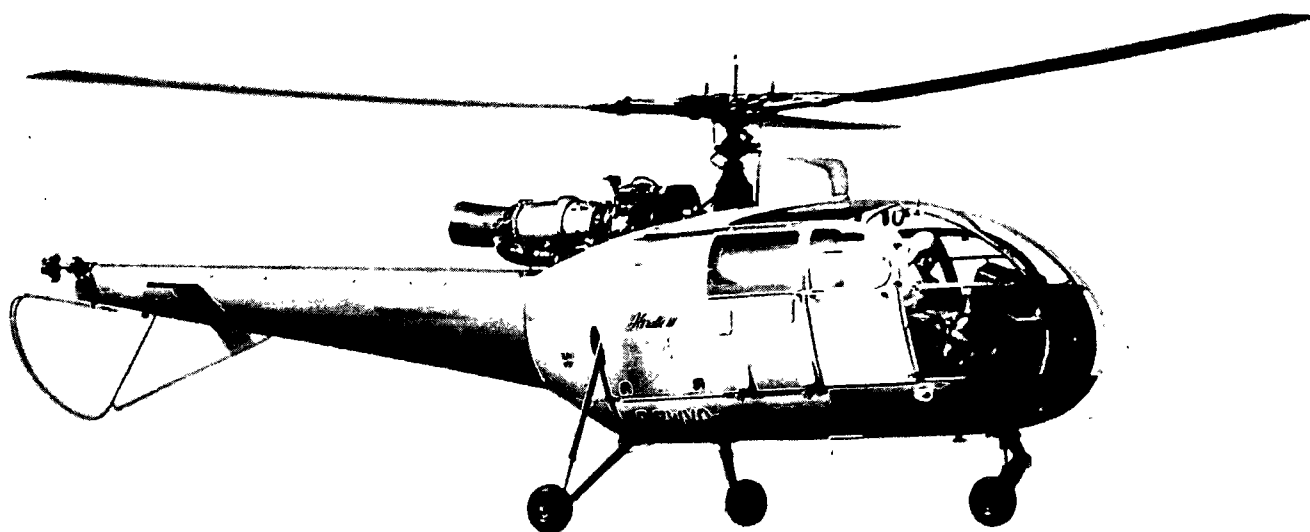
Mfr.	SUD	Max. Speed (Knots)	248
Wing Span	59'	Service Ceiling (Ft.)	30,800
Length	40'	No. & Type of Engines	2 Turboprop
Combat Weight (lbs.)	14,375	Model No.	Bastan
Max. Range (Naut. Miles)	1,080	Mfr.	TURBOMECA
Crew No.	2-3	Rating Each	760 hp.



The Voltigeur (S.E. 117) is a multirole support aircraft, powered by twin turboprop engines. Its straight, low mid-mounted wing is rectangular through the center section, then becomes unequally forward-tapered to the blunt tips. Slight positive dihedral is noted in the wing. The combined engine nacelle/wheel housings extend fore and aft of the wing edges. Glassed-in at the nose and with stepped up cockpit, the fuselage tapers upward toward the tail. The horizontal stabilizer, backward tapered with straight trailing edge and blunt tips, is set with slight positive dihedral at the base of the vertical stabilizer. Disproportionately tall, the vertical stabilizer is tapered fore and aft and has a blunt tip. Externally mounted under the fuselage are two machine guns. A variety of weapons can be carried on six underwing racks. A radial-engined support version, the S.E. 116, is also produced, and a light liaison/transport version, the S.E. 118 Diplomate, is projected.



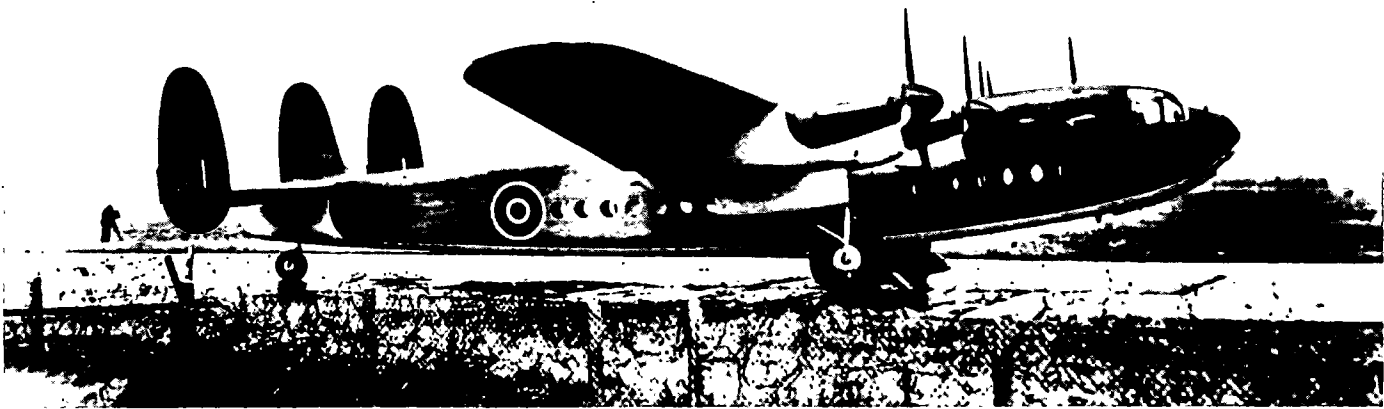
The S.E. 3131 ALOUETTE II was the world's first turbine-powered production helicopter.



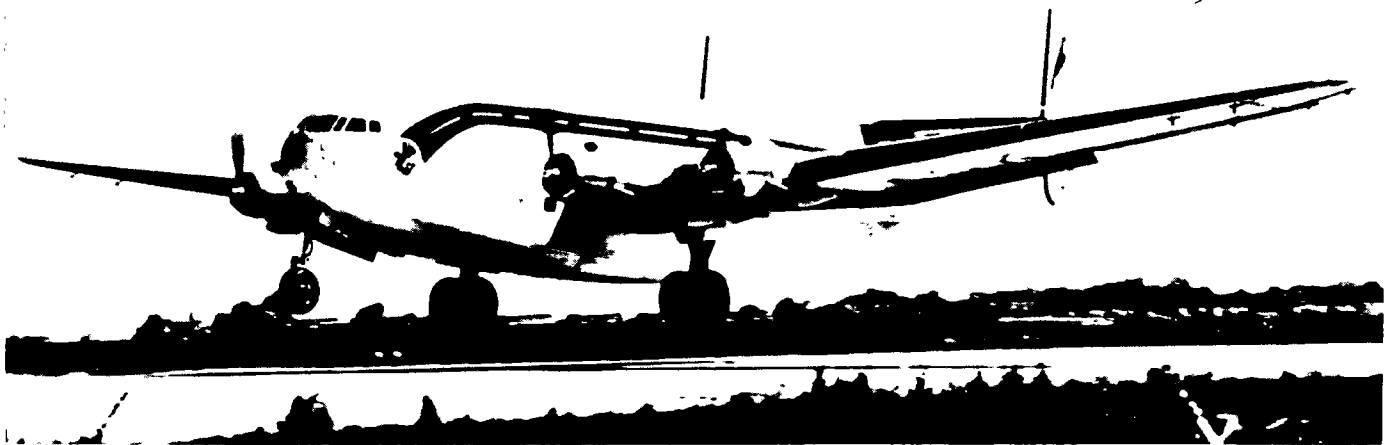
The S.E. 3160 ALOUETTE III is a multi-purpose helicopter developed from the Alouette II.



The AQUILON is a French-built version of the British Sea Venom Mk. 20.



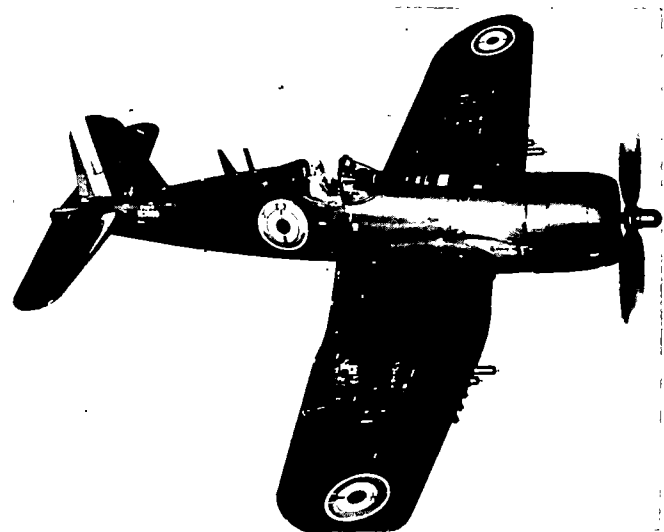
The British AVRO YORK, used as a transport by the French Naval Air Arm.



The Brequet 765 SAHARA heavy military transport can carry up to 146 fully equipped troops.



The S.O. 1221 DJINN is a two-seat, turbine-powered helicopter.



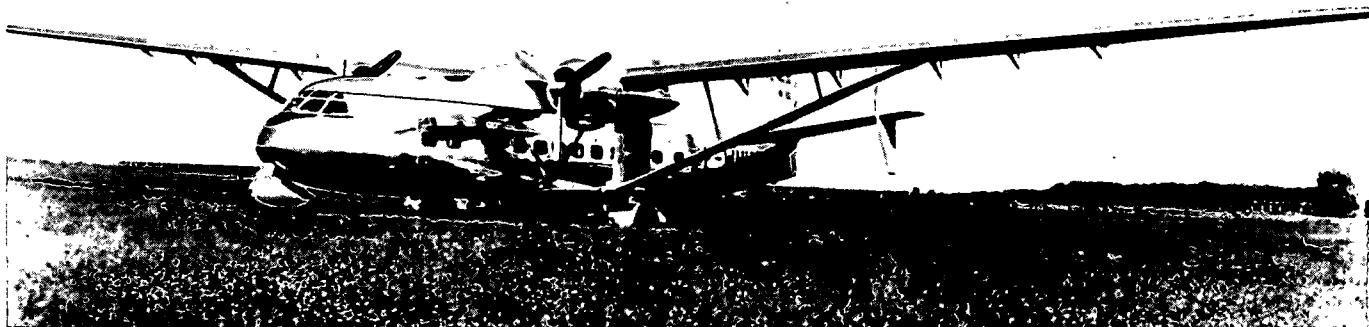
The F4U-7 is the French version of the CORSAIR.



The S.E. 3200 FRELON is a 24-passenger heavy helicopter that also has an ASW capability.



The Nord 1500 GRIFFON II experimental aircraft, designed to test a combination turbojet-ramjet propulsion system.



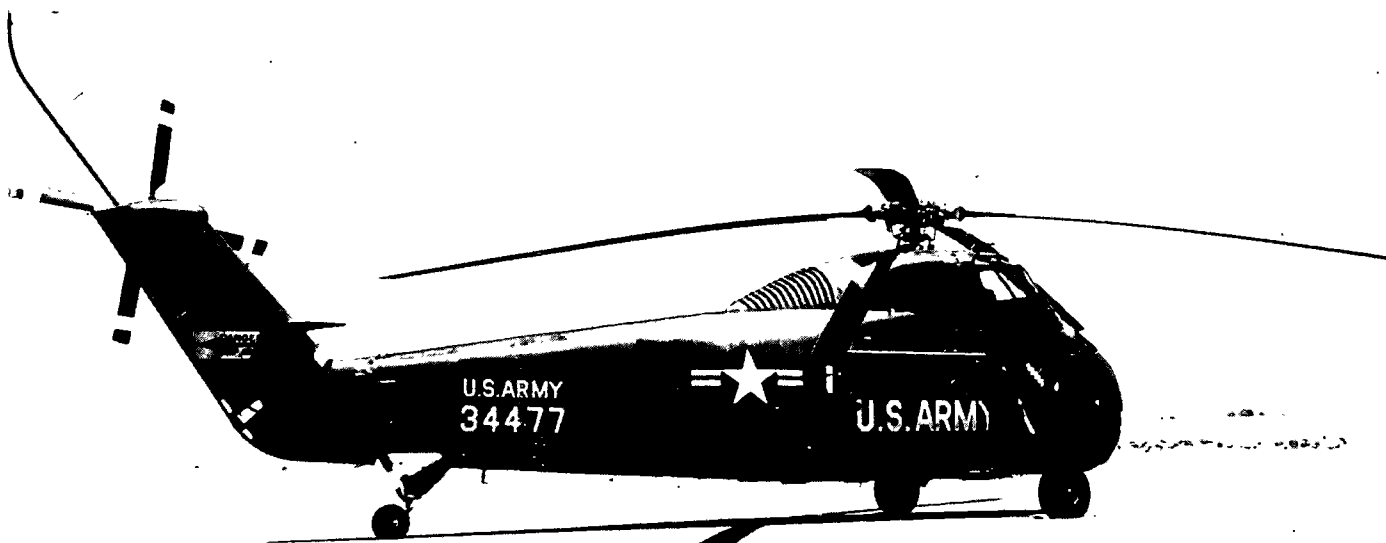
The H.D. 321 cargo transport features a high aspect wing ratio.



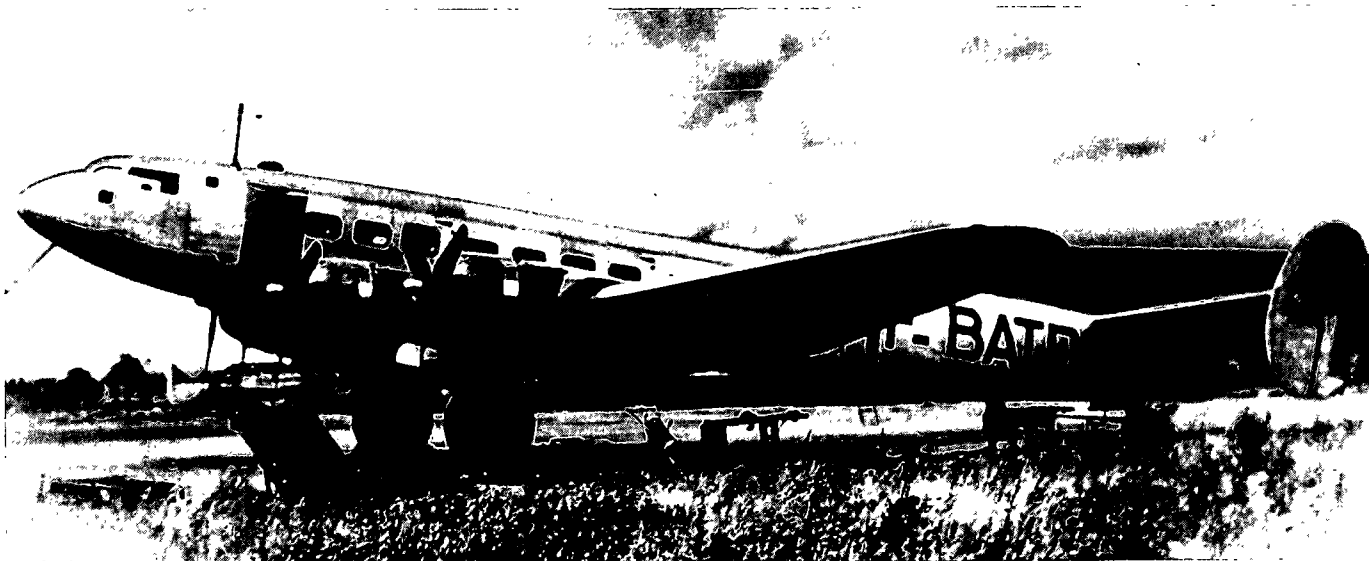
The S.E. 535 MISTRAL jet fighter is a French-built version of the British Vampire.



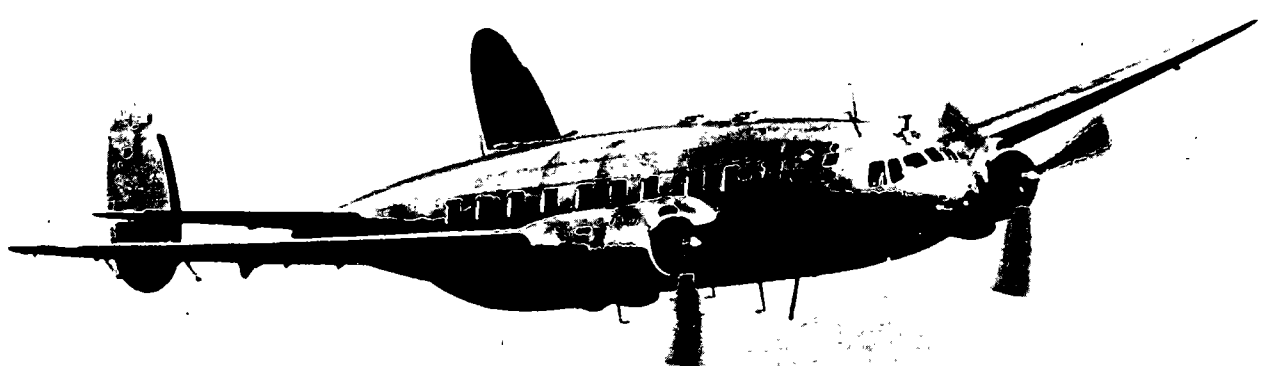
The MD. 450 OURAGAN was the predecessor of the Mystère jet fighter series.



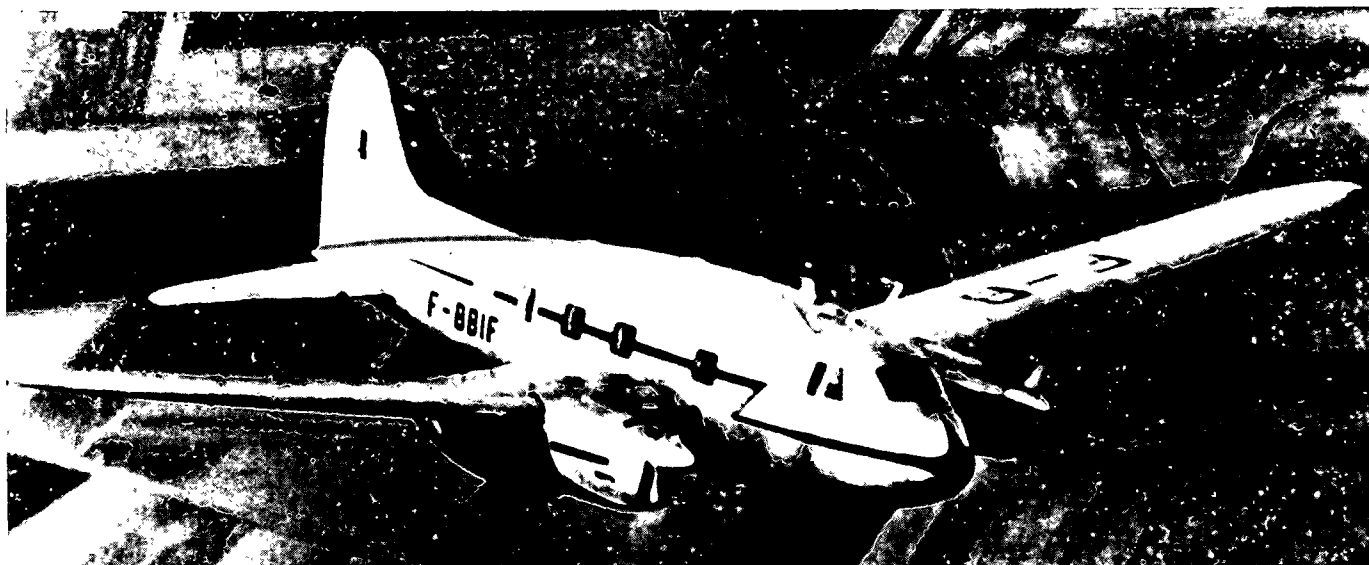
The U.S. Sikorsky S-58/H-34 helicopter is built under license in France by Sud Aviation.



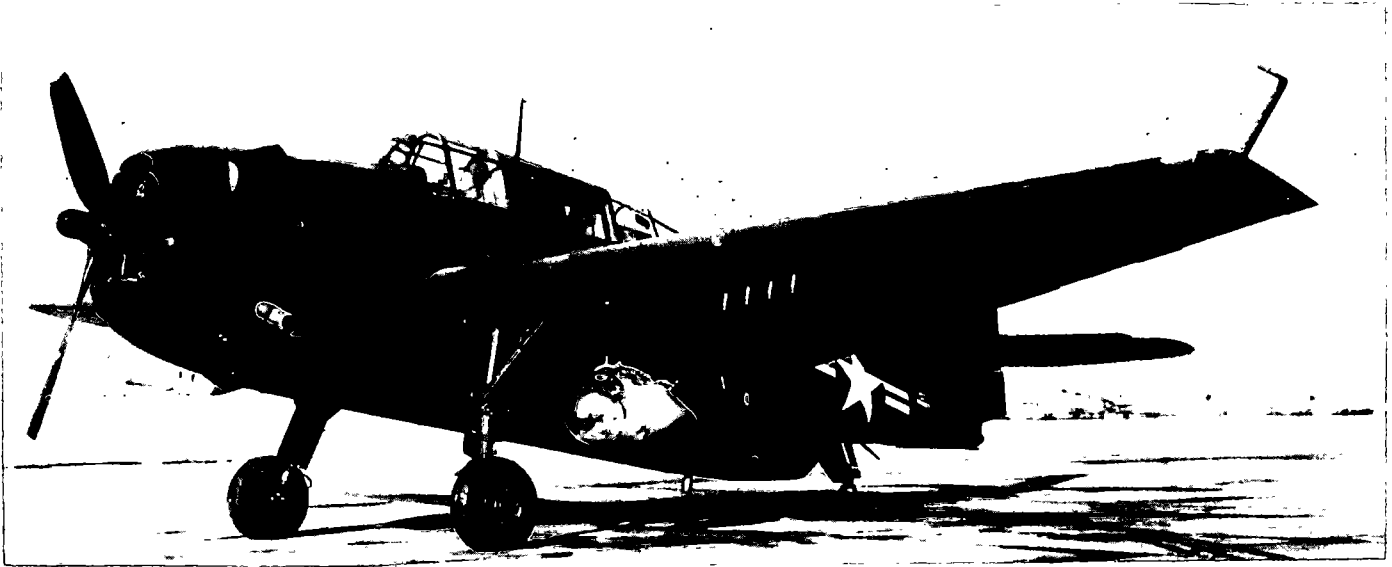
The S.E. LANGUEDOC military transport and air/sea rescue aircraft.



The S. O. 30P BRETAGNE was designed during World War II in unoccupied France.

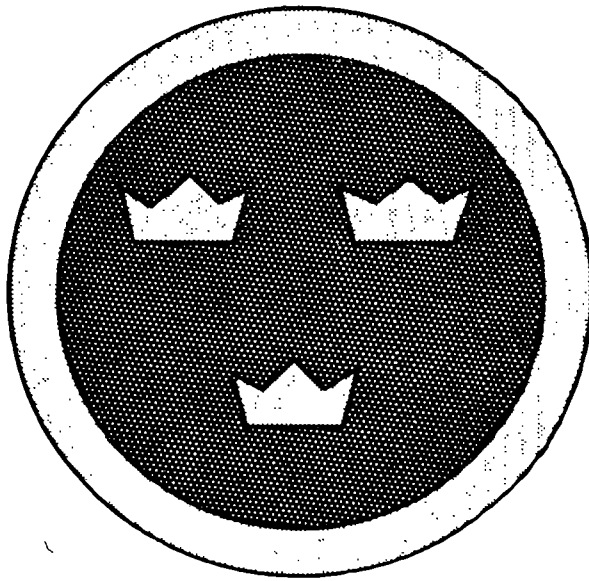


The S.O. 95 CORSE II twin-engine trainer.



The TBM AVENGER was the world's best torpedo bomber during World War II.

SWEDEN



SWEDEN

Aircraft Designations

Aircraft of the Royal Swedish Air Force are assigned designations consisting of a *prefix* identifying the aircraft type or class, a *number*, and where applicable, a *suffix* to denote production series or version.

The following prefixes are used:

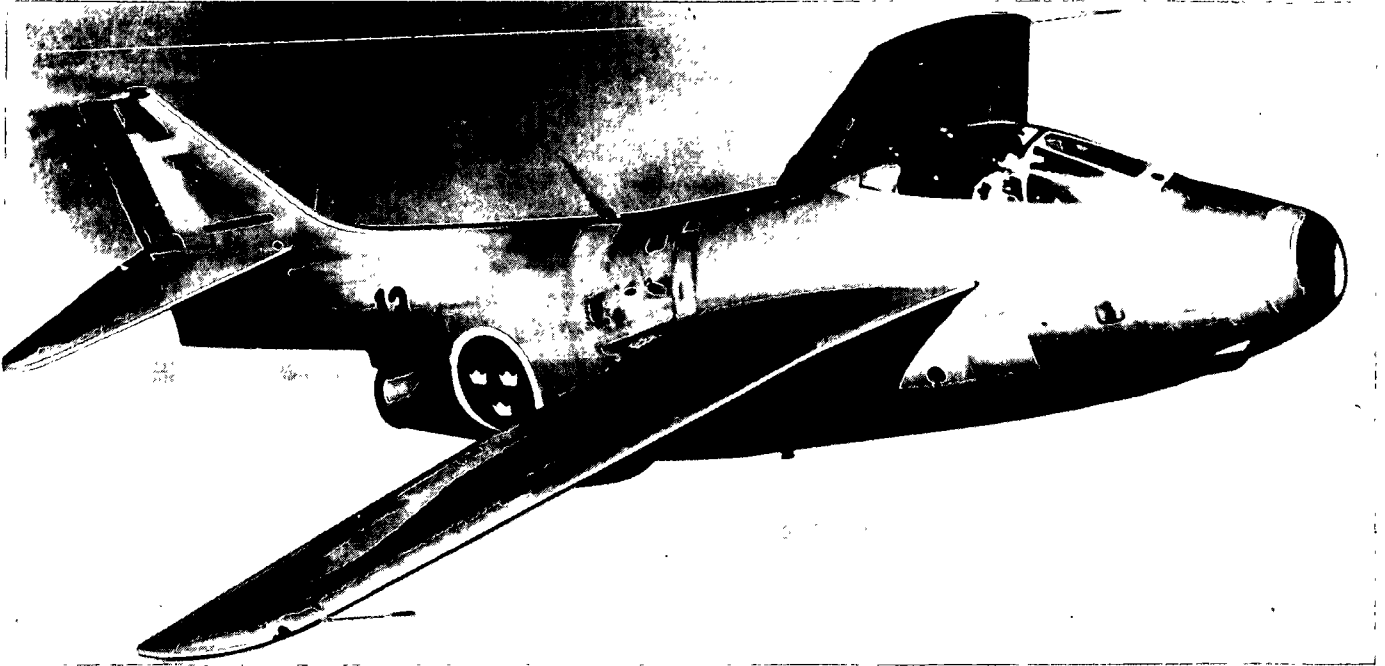
- A—Attack
- B—Bomber
- J—Fighter
- S—Reconnaissance
- Sk—Trainer
- Tp—Transport

Numerical designations are generally assigned to the different types of aircraft in chronological order of their entry into service (e.g., J33, J34, Tp45, Tp47, etc.). Exceptions to this occur only if a numerical designation has previously been allocated, as in the case of some of the Swedish-built aircraft (e.g., A32A, J35).

SWEDEN

Type	Designation	Manufacturer	Country
Attack	A32A Lansen	SAAB	Sweden
Fighter	J29F Tunnan (Barrel)	SAAB	Sweden
	J32B Lansen	SAAB	Sweden
	J33 (Venom NF. 51)	de Havilland	U.K.
	J34 (Hunter F. 51)	Hawker	U.K.
	J35 Draken	SAAB	Sweden
Reconnaissance	S-29C Tunnan (Barrel)	SAAB	Sweden
	S-32C Draken	SAAB	Sweden
Transport	B3 (Ju-86K)	Junkers	Germany
	Tp46 (Devon)	de Havilland	U.K.
	Tp79 (C-47)	Douglas	U.S.A.
	Tp83 (Pembroke C. 52)	Hunting	U.K.
Trainer	J28B (Vampire FB. 50)	de Havilland	U.K.
	J28C (Vampire T. 55)	de Havilland	U.K.
	Sk16 (T-6)	North American	U.S.A.
	Sk50 Safir	SAAB	Sweden
Helicopter	Alouette II (SE 3130)	SAAB (license)	Sweden
Miscellaneous	S14 Storch	Fieseler	Germany
	Tp45 (C-45)	Beech	U.S.A.
	Tp47 (PBX-5A)	Convair	U.S.A.
	Tp78 (Norseman)	C.C.F.	Canada
	Tp81 (JRF Goose)	Grumman	U.S.A.
	Tp91 Safir	SAAB	Sweden

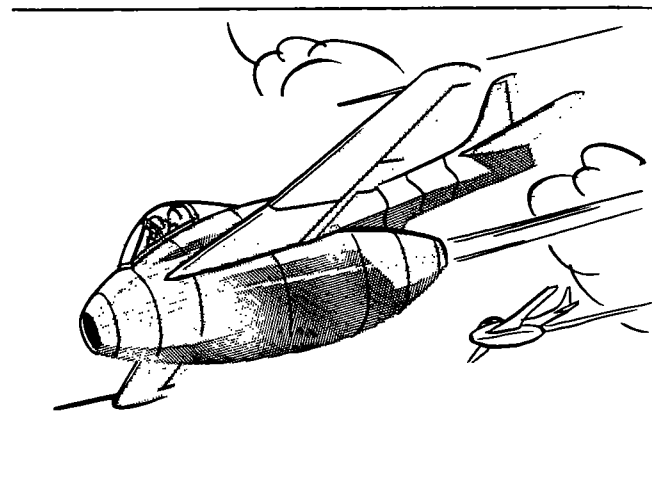
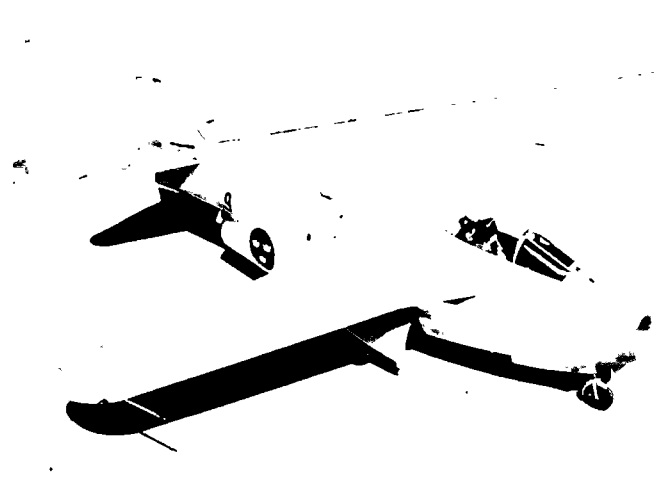
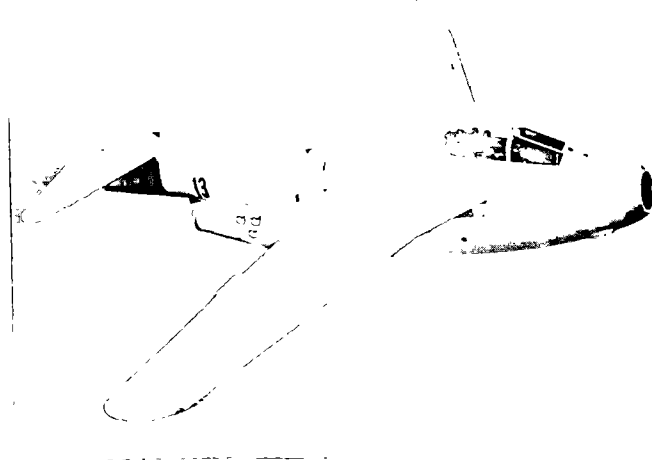
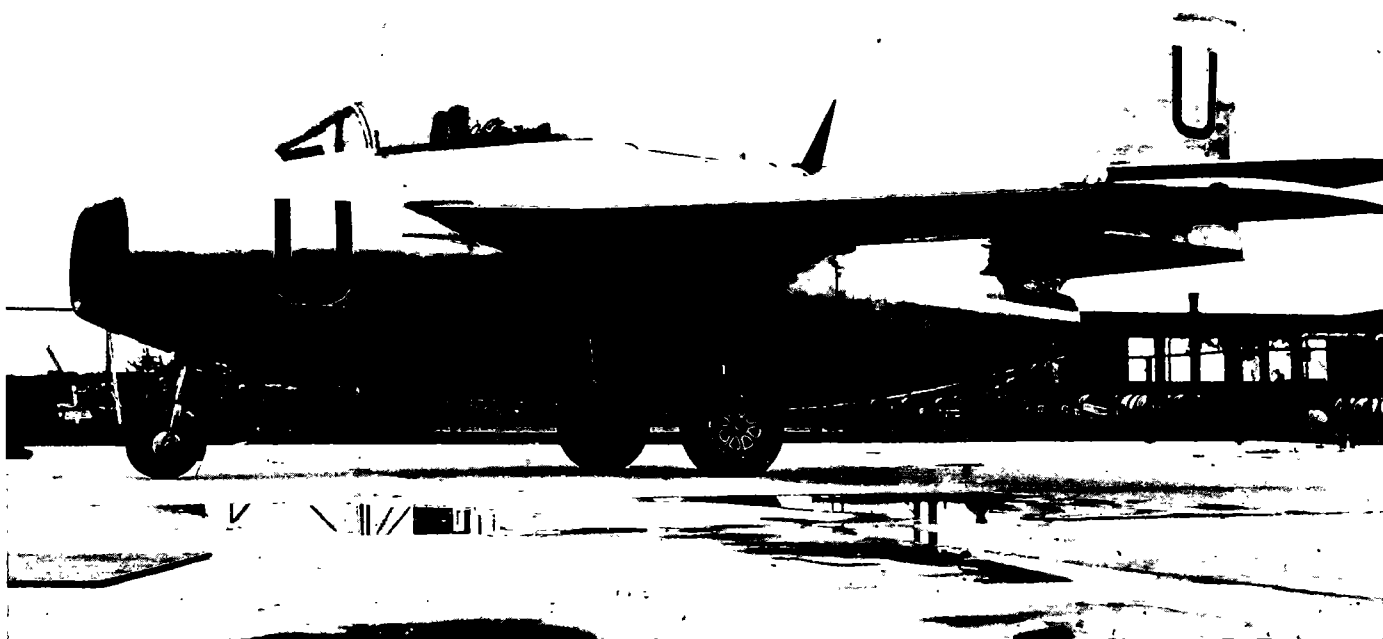


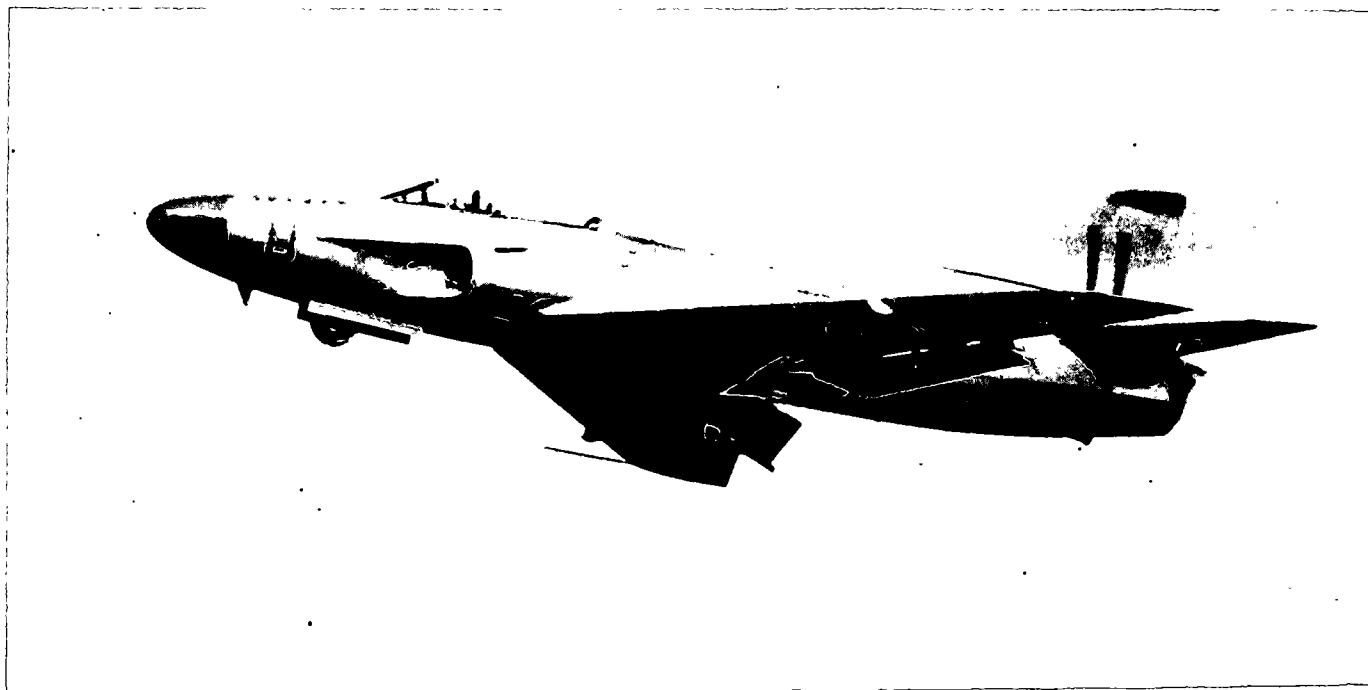


The "Flying Barrel," a midwing single-seat jet, was the first swept-wing fighter placed in full-scale production in Western Europe. Its thin wing uses two sweep angles (45° at roots, 28° near wing tips), has no dihedral, is blunt tipped, and has a cranked outer leading edge. Squared off at the nose intake, the round, fat fuselage thins abruptly at the exhaust outlet, which is ventrally located, just forward of the horizontal stabilizer. The vertical stabilizer is backward tapered with a straight trailing edge and square tip. Mounted at the base of the vertical stabilizer, the horizontal stabilizer has no dihedral, is unequally backward tapered, and has pointed tips. Generally, fixed 20-mm cannon and externally mounted rockets make up the armament. Five production versions of the SAAB-29 were built for utilization, variously, in day fighter, ground attack, and photo reconnaissance roles. The J-29F final production version featured a cranked outer wing, and most of the earlier operational models were also modified to this configuration.

DATA APPLY TO J-29F

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	SAAB	Max. Range (Naut. Miles)	1,485 (with drop tanks)	No. of Engines	1
Wing Span	36'	Crew No.	1	Model No.	Ghost RM-2B
Length	33'	Max Speed (Knots)	583	Mfr.	Swedish built DE HAVILLAND
Combat Weight (Lbs.)	17,640	Service Ceiling (Ft.)	49,200	Type	Turbojet
				Rating Each	6,174 # with A.B.

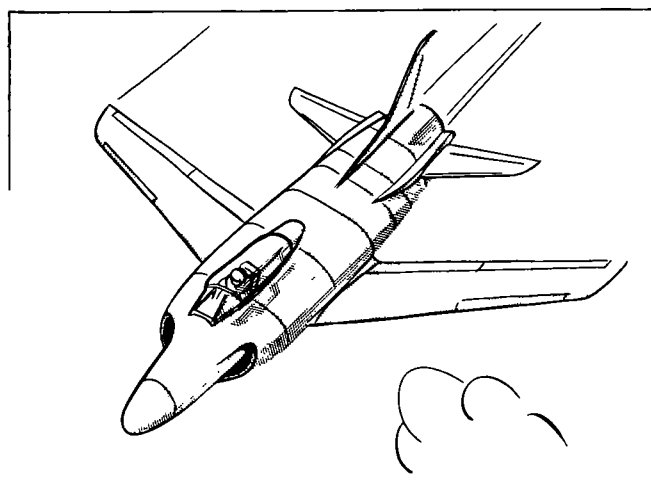
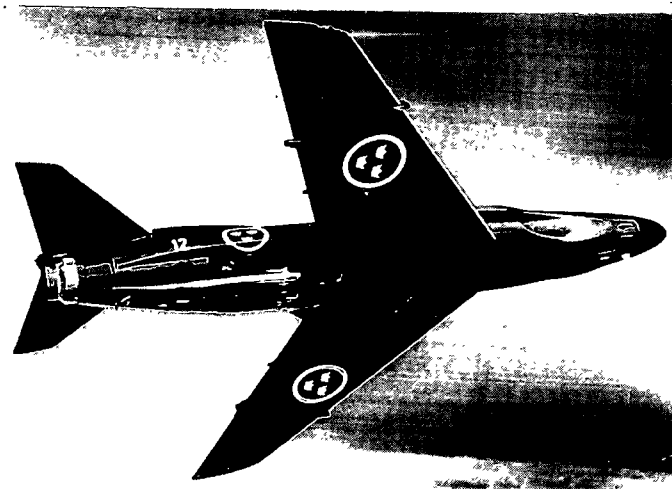
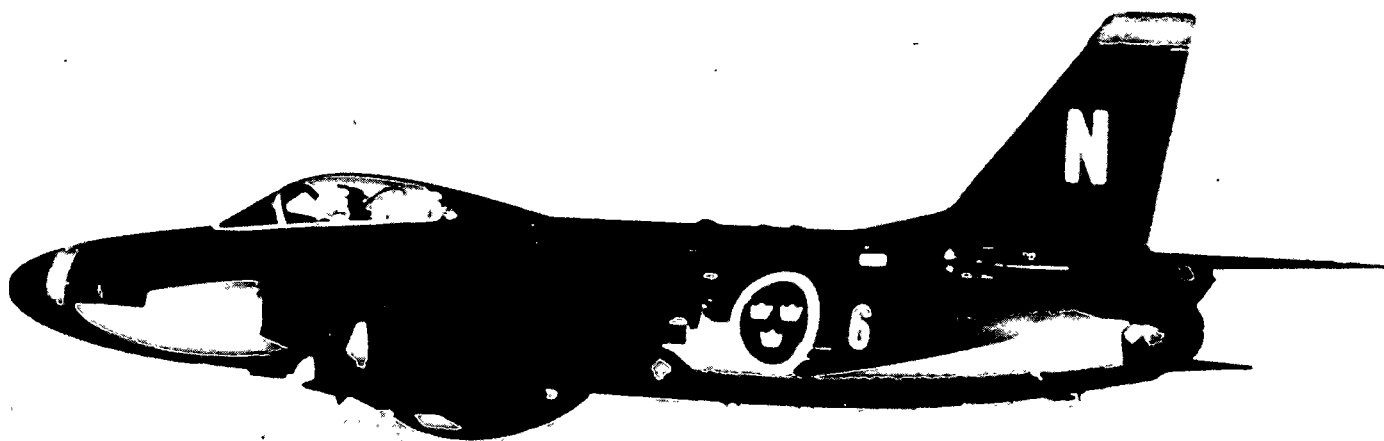
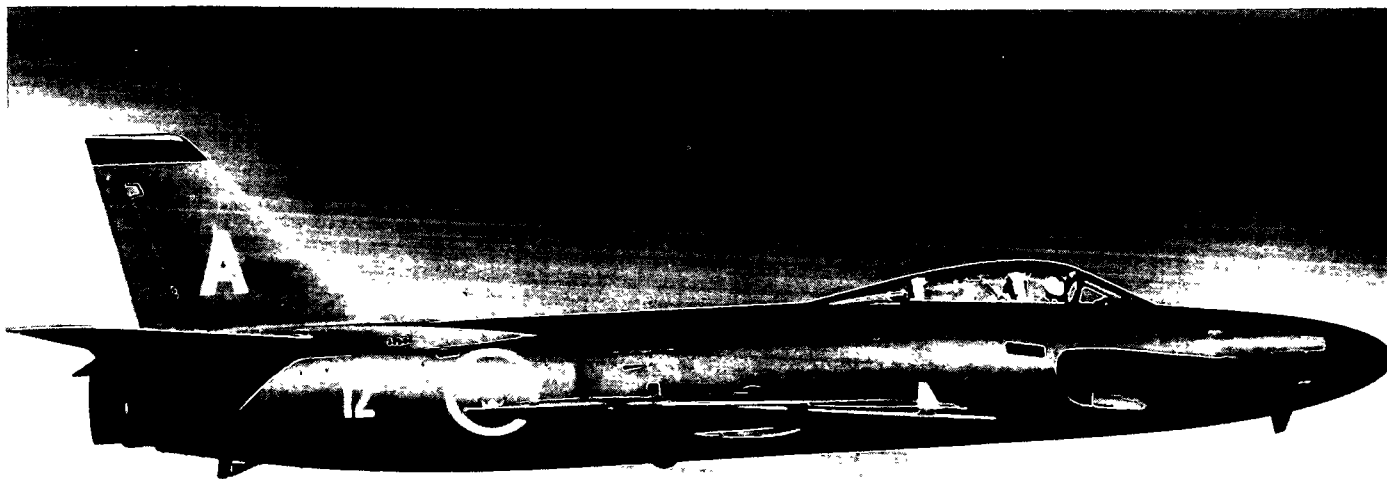


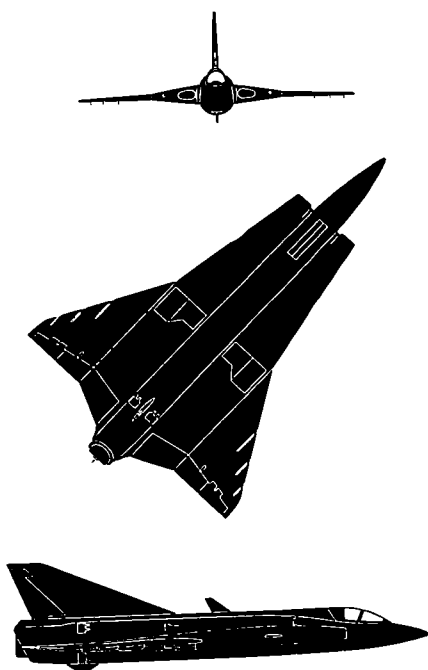


The Lansen is an all-weather, single-jet, low-wing aircraft. While it was originally designed as an attack fighter (A-32A), a night fighter version (J-32B) and a photographic reconnaissance version (S-32C) have also been developed. The Lansen's low-mounted sweptback wing is tapered, has no dihedral, and is blunt-tipped. Twin side intakes in the cigar-shaped fuselage feed the single engine. All tail surfaces are sweptback and tapered with blunt tips. The horizontal stabilizer has no dihedral. Various combinations of external underwing-mounted bombs, rockets, and air-to-surface missiles can be carried.

DATA APPLY TO A-32A

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	SAAB	Mox. Range (Naut Miles)	1,740	No. of Engines	1
Wing Span	43'	Crew No.	2	Model No.	Avon RM-5
Length	48'	Mox. Speed (Knots)	619	Mfr.	Swedish built ROLLS ROYCE
Combat Weight (Lbs.)	28,665	Service Ceiling (Ft.)	49,200	Type	Turbojet
				Rating Each	9,923 # s.t.

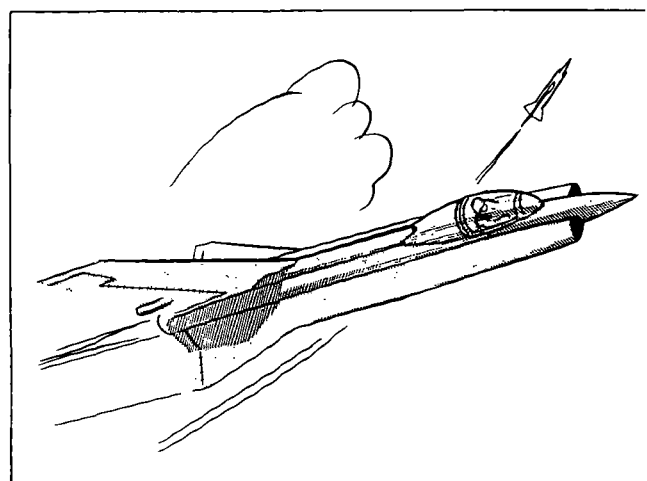
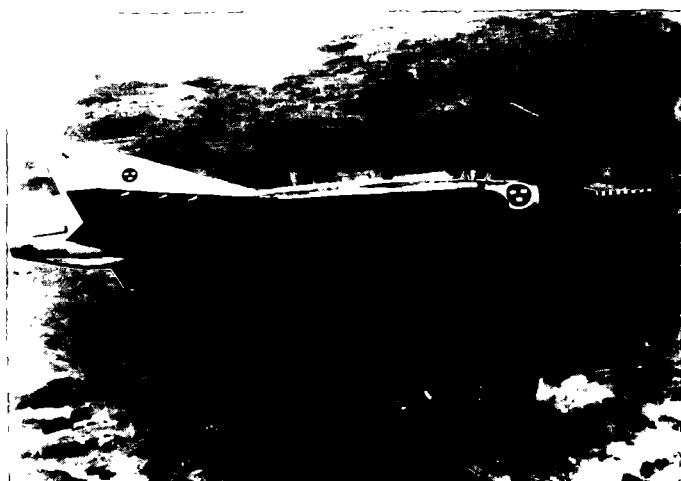
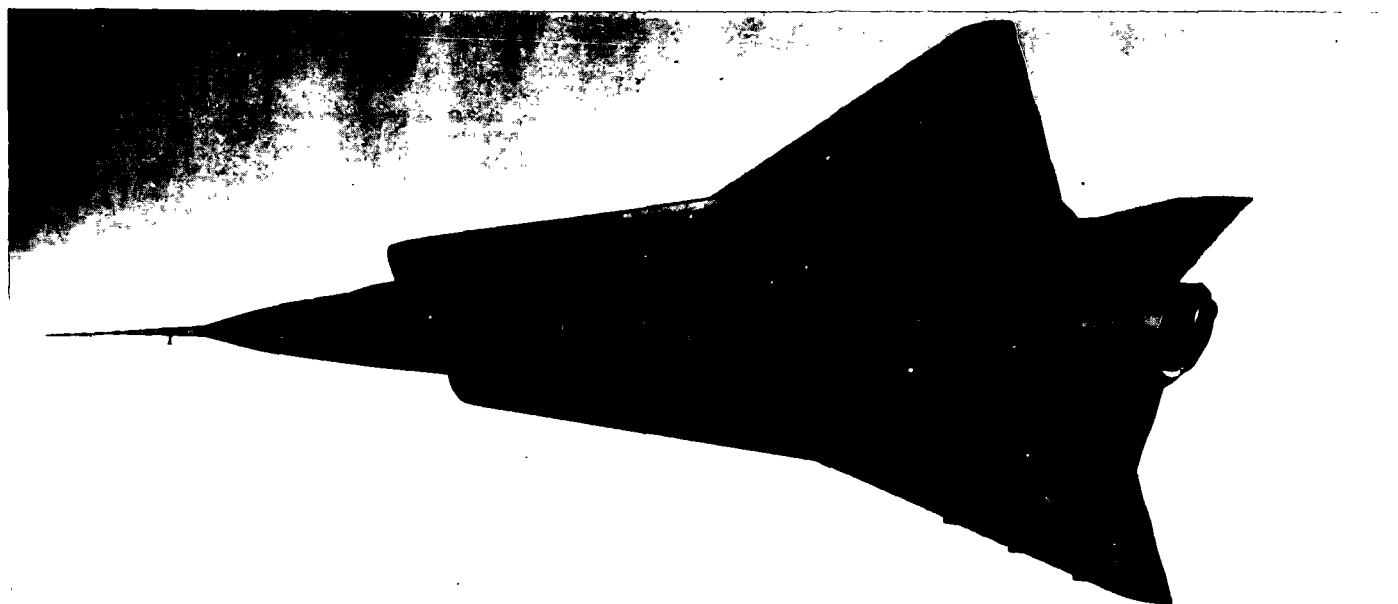
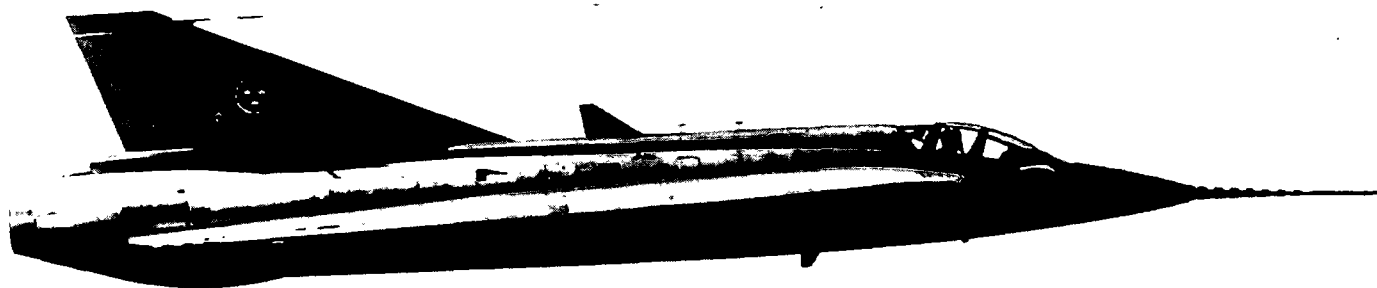




The Draken is a single-seat, all-weather, supersonic fighter designed primarily to intercept bombers in the transonic speed range. This aircraft's principal recognition feature is its midmounted double-delta-type wing extending from canopy almost to tail cone. The wing's trailing edge is forward tapered inboard, then straight-edged to the tips. Twin elliptical inlets in the wing roots feed the fuselage-encased engine. Sweptback and tapered, the large vertical stabilizer has a squared-off tip. No horizontal stabilizer is used. Amidships, a small dorsal fin, which appears dwarfed by the tall vertical stabilizer, provides an additional recognition feature. Production models of the Draken are the J-35A standard production version, the J-35B with larger engine and afterburner, and the J-35C, a tandem two-seat trainer. The B version has exceeded Mach 2 in level flight. Fixed armament (A & B) consists of two in-wing-mounted revolving barrel cannons. Sidewinder missiles or various combinations of unguided rockets and/or bombs may be carried externally under the fuselage or wings.

DATA APPLY TO J-35A

AIR FRAME		OPERATIONAL DATA		POWER PLANT	
Mfr.	SAAB	Max. Range (Naut Miles)		No of Engines	1
Wing Span	30'	Crew Na.	1	Model No.	Avon 200M-6
Length	52'	Max. Speed (Knots)	Mach 1.8	Mfr.	Swedish built ROLLS ROYCE
Combat Weight (Lbs.)	17,900	Service Ceiling (Ft.)	60,000-65,000	Type	Turbojet
				Rating Each	15,000 # with A.B.



SAAB

SAAB-91 SAFIR

DATA APPLY TO SAFIR 91D

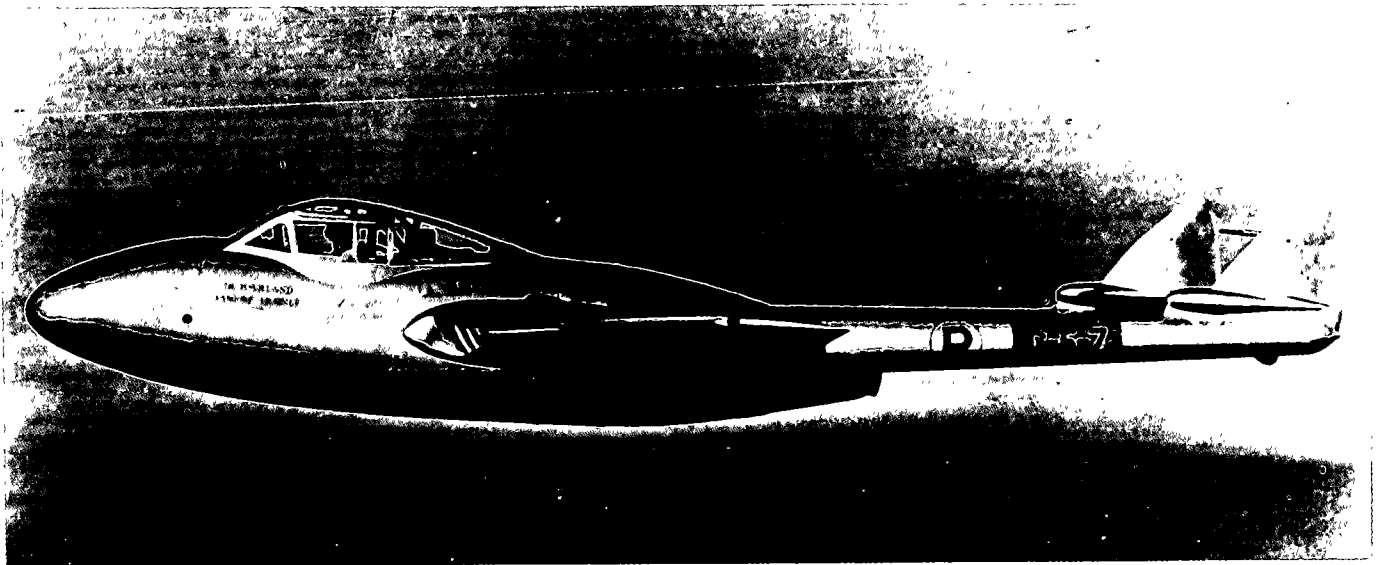


Mfr.	SAAB	Mox. Speed (Knots)	149
Wing Span	35'	Service Ceiling (Ft.)	20,008
Length	26'	No. & Type of Engines	1 Piston
Combat Weight (Lbs.)	2,657	Model No	Lycoming O-360
Mox. Range (Naut. Miles)	620	Mfr.	LYCOMING
Crew No.	3-4	Rating Each	180 hp.



The Safir is a light, low-wing, single-piston-engined aircraft, originally constructed as a 2-3 seat trainer. Later modifications include a four-seater adaptable to air evacuation, and various private and business versions. The SAAB-91 wing is equitapered, has slight positive dihedral, and blunt tips. A feature of the slightly rectangular fuselage is the large-glass-area cockpit. The midmounted horizontal stabilizer is set with no dihedral, has tapered edges, and rounded tips, with the trailing edge slotted at the root. The vertical stabilizer is unequally forward tapered and blunt tipped. Some versions carry two 8-mm guns and can carry rockets and training bombs. The SAAB-91 has been used as a trainer in Sweden, Norway, Ethiopia, and Finland. In addition, Safirs are flying in 13 other countries.

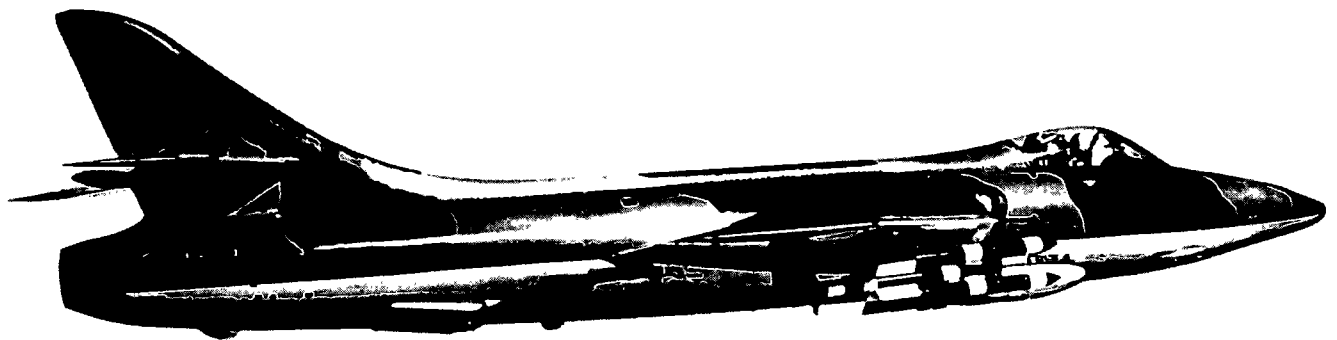


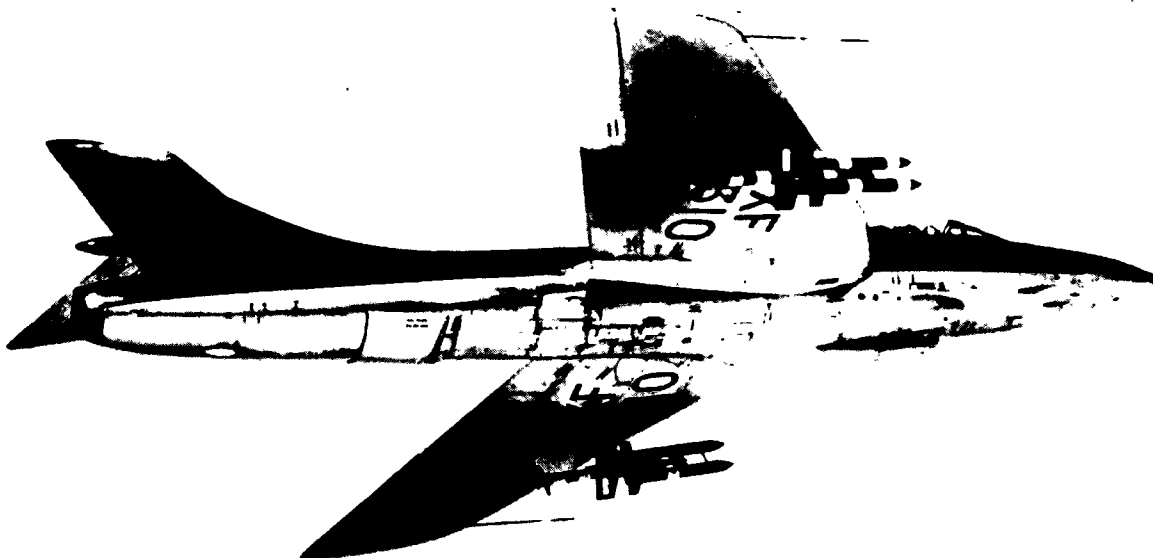


Sweden is one of several nations to which the British VAMPIRE TRAINER was exported.

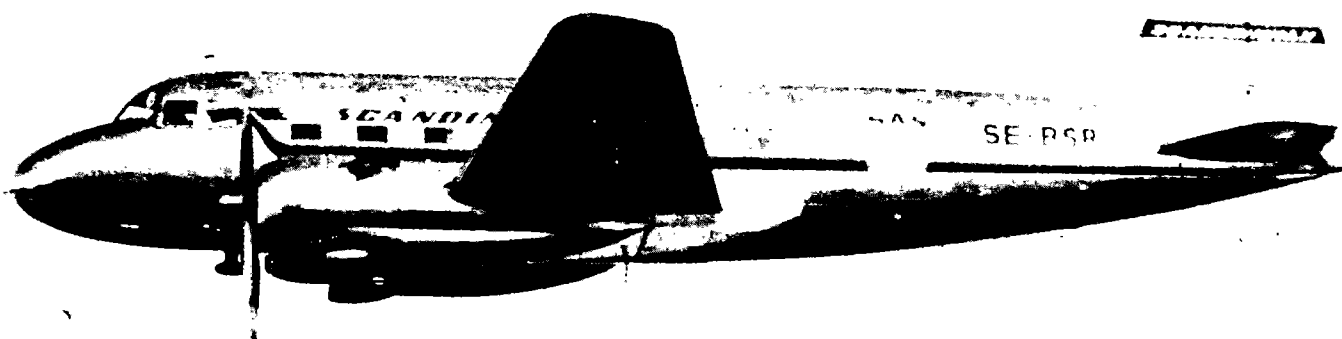


The export version of the British VENOM N.F. Mk. 2 is designated J-33 in the Swedish Air Force.

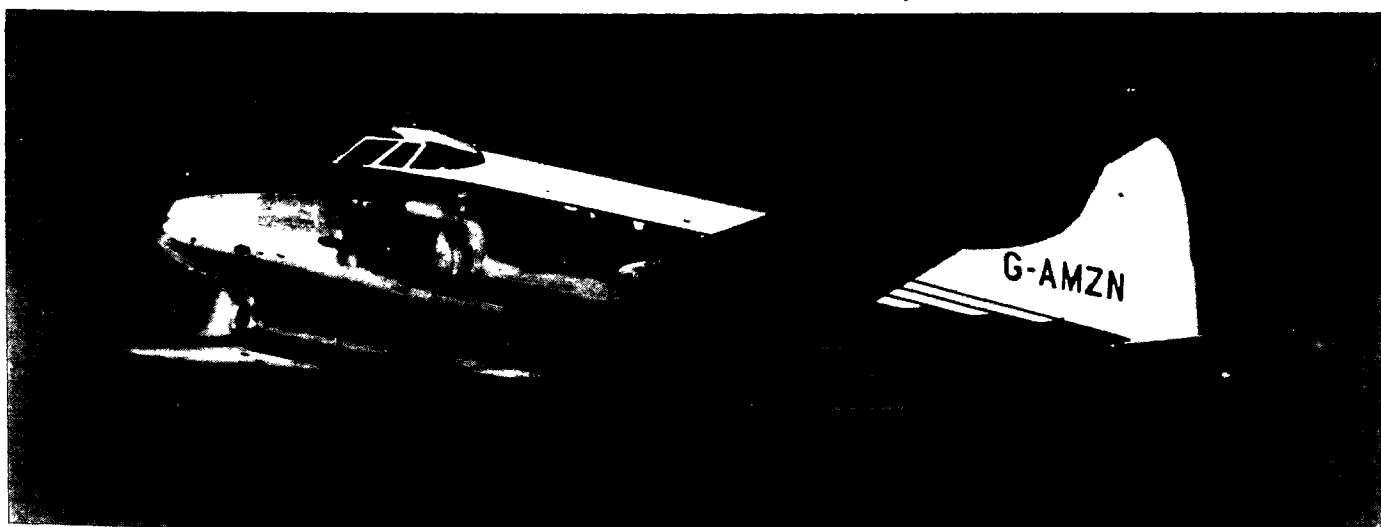




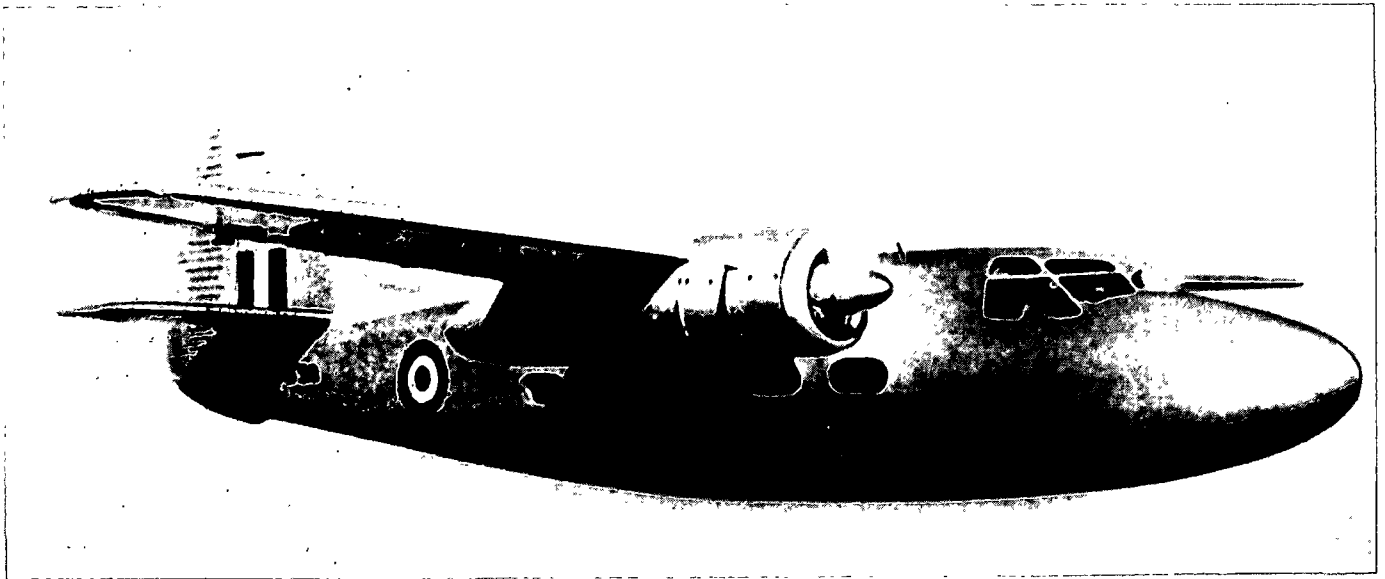
The export version of the British HAWKER HUNTER is designated J-34 in the Swedish Air Force.



The SAAB-90 SCANDIA twin-engined transport resembles the C-47 in general appearance.



Swedish military transports include an export version of the British DOVE.



Sweden's Air Force uses the British PEMBROKE for transport operations.

OTHER FOREIGN NATIONS



AFGHANISTAN

Type	Designation	Manufacturer	Country
Fighter	Fresco (MIG-17)	Mikoyan & Gurevich	U.S.S.R.
Light Bomber	Beagle (Il-28)	Ilyushin	U.S.S.R.
Transport	Crate (Il-14)	Ilyushin	U.S.S.R.
Trainer	Midget (U-MIG-15)	Mikoyan & Gurevich	U.S.S.R.
	Moose (YAK-11)	Yakovlev	U.S.S.R.
	Max (YAK-18)	Yakovlev	U.S.S.R.
Helicopter	Hound (Ml-4)	Mikhail	U.S.S.R.
	Hare (Ml-1)	Mikhail	U.S.S.R.
Miscellaneous	Tiger Moth	de Havilland	U.K.
	Anson	Avro	U.K.
	Colt (AN-2)	Antonov	U.S.S.R.
	Creek (YAK-12)	Yakovlev	U.S.S.R.

ARGENTINA

Type	Designation	Manufacturer	Country
Fighter	Meteor F-4	Gloster	U.K.
	F-86	North American	U.S.A.
Light Bomber	Lincoln II	Avro	U.K.
	Lancaster I	Avro	U.K.
Transport	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Viking VC-1	Vickers-Armstrong	U.K.
	Wayfarer	Bristol	U.K.
Trainer	DL-22	I.Ae.	Argentina.
	Mentor T-34	Beech	U.S.A.
	Trojan T-28	North American	U.S.A.
	Fiat G-46	Fiat	Italy.
	Kansas AT-11 (SNB)	Beech	U.S.A.
	Prentice T-1	Percival	U.K.
Miscellaneous	IA-35	I.Ae.	Argentina.
	Dove (DH-104)	de Havilland	U.K.
	El Boyero	I.Ae.	Argentina.
	MS-760	Morane-Saulnier	France.

ARGENTINE (NAVAL AIR ARM)

Type	Designation	Manufacturer	Country
Fighter	F9F-2	Grumman	U.S.A.
	Corsair F4U	Chance-Vought	U.S.A.
ASW	Neptune P2V-5	Lockheed	U.S.A.
	Mariner PBM	Martin	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
Helicopter	HO4S	Sikorsky	U.S.A.
	HSS-1	Sikorsky	U.S.A.
Trainer	Bell-47 HTL	Bell	U.S.A.
	Kansas SNB (AT-11)	Beech	U.S.A.
	Harvard SNJ (T-6)	North American	U.S.A.
Miscellaneous	Valiant SNV (BT-13)	Convair (Consolidated-Vultee)	U.S.A.
	Catalina PBY-5/6	Convair	U.S.A.
	Goose JRF-5/6	Grumman	U.S.A.
	Duck J2F-6	Grumman	U.S.A.

AUSTRALIA

Type	Designation	Manufacturer	Country
Fighter	Meteor Mk. 8	Gloster	U.K.
	Sabre Mk. 30/31/32	Commonwealth	Australia.
	Vampire Mk. 30/31	de Havilland	Australia.
Light Bomber	Canberra Mk. 20	Government	Australia.
	Lincoln Mk. 31	Government	Australia.
ASW	Neptune P2V-5	Lockheed	U.S.A.
Transport	Hercules C-130A	Lockheed	U.S.A.
	Skytrain C-47B	Douglas	U.S.A.
	Convair 440	Convair (Consolidated-Vultee)	U.S.A.
Trainer	Vampire Mk. 33/35/35A	de Havilland	U.K./Aust.
	Canberra Mk. 21	Government	Australia.
	Canberra T-4	Government	Australia.
	Winjeel	Commonwealth	Australia.
Helicopter	H-5	Sikorsky	U.S.A.
Miscellaneous	Cessna 180	Cessna	U.S.A.

AUSTRALIAN (NAVAL AIR ARM)

Naval Aviation

The Fleet Air Arm is a postwar establishment of the Royal Australian Navy (R.A.N.).

Type	Designation	Manufacturer	Country
Fighter	Sea Venom	de Havilland	U.K.
	Sea Fury	Hawker	U.K.
ASW	Gannet AS-1	Fairey	U.K.
Transport	Skytrain R4D (C-47)	Douglas	U.S.A.
Helicopter	Sycamore H-50/51	Bristol	U.K.
Trainer	Vampire T-11	de Havilland	U.K.
	Gannet T-2	Fairey	U.K.
Miscellaneous	Firefly TT-4	Fairey	U.K.
	Auster	Auster	U.K.

AUSTRIA

The Austrian Air Force

The Austrian Air Force is a part of the Army but enjoys considerable autonomy. The organizational title is Command of the Air Force. It was organized in 1956, and has no combat-type aircraft.

Type	Designation	Manufacturer	Country
Helicopter	Whirlwind (S-55)	Westland	U.K.
	Alouette II	Sud-Aviation	France.
	H-13G/H	Bell	U.S.A.
Trainer	CM-170	Fouga	France.
	Vampire	de Havilland	U.K.
	P-149	Piaggio	Italy.
	Moose (YAK-11)	Yakovlev	U.S.S.R.
	Max (YAK-18)	Yakovlev	U.S.S.R.
	Zlin 126	Zlin	Czech.
	Fiat G-46	Fiat	Italy.
	SAAB-17	SAAB	Sweden.
	LT-66 (T-6)	North American	U.S.A.
Miscellaneous	PA-18	Piper	U.S.A.
	Cessna 172/182	Cessna	U.S.A.
	Bird Dog (L-19A/E)	Cessna	U.S.A.
	L-20	de Havilland	U.K.

BELGIUM

Type	Designation	Manufacturer	Country
Fighter	CF-100	Avro	Canada.
	Hunter F-4/F-6	Hawker	U.K.
	Meteor F-8	Gloster	U.K.
	Thunderstreak (F-84F)	Republic	U.S.A.
	Thunderflash (RF-84F)	Republic	U.S.A.
Transport	Packet C-119G (R4Q)	Douglas	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Skytrain C-47B (R4D)	Douglas	U.S.A.
	Liftmaster C-118 (R6D)	Douglas	U.S.A.
Trainer	CM-170	Fouga	France.
	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Meteor T-7	Gloster	U.K.
	Texan T-6 (SNJ)	North American	U.S.A.
Miscellaneous	Stampe SV-4B	Stampe	Belgium.
	Pembroke	Percival	U.K.

BOLIVIA

Type	Designation	Manufacturer	Country
Fighter	Mustang F-51D	North American	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Trainer	TF-51D	North American	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Kaydet PT-17	Stearman	U.S.A.
Miscellaneous	Expeditor C-45 (JRB)	Beech	U.S.A.
	Valiant BT-13 (SNV)	Convair (Consolidated-Vultee)	U.S.A.
	Cessna-180	Cessna	U.S.A.

BRAZIL

Type	Designation	Manufacturer	Country
Fighter	Meteor F-8	Gloster	U.K.
	Shooting Star F-80C	Lockheed	U.S.A.
Lt. Bmr/Tac/Attack	Mitchel B-25	North American	U.S.A.
	Invader B-26	Douglas	U.S.A.
ASW	Fortress B-17	Boeing	U.S.A.
	Neptune P2V-5	Lockheed	U.S.A.
Transport	Tracker S2F-1	Grumman	U.S.A.
	Commando C-46 (R5C)	Curtiss	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Lodestar C-60 (R5V)	Lockheed	U.S.A.
	Packet C-82	Fairchild	U.S.A.
Trainer	Viscount	Vickers	U.K.
	Shooting Star T-33 (TV-2)	Lockheed	U.K.
	Meteor T-7	Gloster	U.K.
	Texan T-6/6G (SNJ)	North American	U.S.A.
	Navigator T-7 (SNB-2)	Beech	U.S.A.
	Kansas T-11 (SNB-1)	Beech	U.S.A.
	Fokker (S-11) T-21	Fokker (under license)	Netherlands.
	Reliant T-19	Fairchild	U.S.A.
Helicopter	H-19D (HRS)	Sikorsky	U.S.A.
	H-13	Bell	U.S.A.
	HSS-1N	Sikorsky	U.S.A.
	Paris MS-760	Morane-Saulnier	France.
Miscellaneous	Ventura B-34 (PV-1, 3)	Lockheed	U.S.A.
	Catalina PBV-5A	Convair (Consolidated-Vultee)	U.S.A.
	Albatross SA-16	Grumman	U.S.A.
	Bonanza C-35	Beech	U.S.A.
	C-40	Lockheed	U.S.A.
	C-43	Beech	U.S.A.
	Expedito C-45 (JRB)	Beech	U.S.A.
	Forwarder C-61	Fairchild	U.S.A.
	Norseman C-64	Canadair	Canada.
	Lodestar C-66	Lockheed	U.S.A.
	Grasshopper L-4	Piper	U.S.A.
	Bird Dog L-19	Cessna	U.S.A.

BULGARIA

Type	Designation	Manufacturer	Country
Fighter	Fagot MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Fresco D-MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Farmer MIG-19	Mikoyan & Gurevich	U.S.S.R.
Light Bomber	Beagle Il-28	Ilyushin	U.S.S.R.
Transport	Cab Li-2	Lisitsin	U.S.S.R.
	Crate Il-28	Ilyushin	U.S.S.R.
Trainer	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.

BURMA

Type	Designation	Manufacturer	Country
Fighter.....	Sea Fury FB Mk. 11.....	Hawker.....	U.K.
Transport.....	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
	Freighter.....	Bristol.....	U.K.
Trainer.....	Vampire T Mk. 55.....	de Havilland.....	U.K.
	Sea Fury T Mk. 20.....	Hawker.....	U.K.
	Tiger Moth.....	de Havilland.....	U.K.
	Provost T Mk. 1.....	Provost.....	U.K.
	Chipmunk T Mk. 10.....	de Havilland.....	U.K.
Helicopter.....	Vertol 44A.....	Vertol.....	U.S.A.
	Bell 47-G.....	Bell.....	U.S.A.
Miscellaneous.....	Otter.....	de Havilland.....	Canada.
	Auster.....	Auster.....	U.K.
	Cessna 180.....	Cessna.....	U.S.A.
	Expeditor C-45 (JRB).....	Beech.....	U.S.A.

CAMBODIA

The Cambodian Air Force

The Cambodian Air Force is organized under a Colonel as the Chief of Staff. The Air Force operates under the Army.

Type	Designation	Manufacturer	Country
Transport.....	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
Trainer.....	Texan T-6G (SNJ).....	North American.....	U.S.A.
	MS-733.....	Morane-Saulnier.....	France.
Helicopter.....	Alouette.....	Sud.....	France.
Miscellaneous.....	Bird Dog L-19.....	Cessna.....	U.S.A.
	L-20.....	de Havilland.....	Canada.
	FD-25A.....	Fletcher.....	U.S.A.
	Cessna 170.....	Cessna.....	U.S.A.
	Cessna 180.....	Cessna.....	U.S.A.

CENTRAL AFRICAN FEDERATION

(ROYAL RHODESIAN AIR FORCE)

Type	Designation	Manufacturer	Country
Fighter-Bomber.....	Vampire FB-9.....	de Havilland.....	U.K.
Light Bomber.....	Canberra B-6.....	English Electric.....	U.K.
Transport.....	Canadair C-4.....	Canadair.....	Canada.
	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
Trainer.....	Vampire T-11.....	de Havilland.....	U.K.
	Provost T-52.....	Hunting.....	U.K.
Miscellaneous.....	Pembroke C-1.....	Hunting.....	U.K.

CEYLON

The Royal Ceylon Air Force

The Royal Ceylon Air Force is an integral part of the forces for the defense of Ceylon. The air force commander is responsible to the Minister of Defense (Prime Minister) through the Permanent Secretary for Defense and External Affairs.

Type	Designation	Manufacturer	Country
Transport.....	Heron C-2.....	de Havilland.....	U.K.
	Devon C-1.....	de Havilland.....	U.K.
Helicopter.....	Dragonfly.....	Westland.....	U.K.
Trainer.....	Provost T Mk. 1.....	Hunting.....	U.K.
	Chipmunk T Mk. 10.....	de Havilland.....	U.K.
	Balliol T Mk. 2.....	Boulton Paul.....	U.K.
	Oxford Mk. 2.....	Airspeed.....	U.K.
Miscellaneous.....	Pioneer CC Mk. 1.....	Scottish Aviation.....	U.K.

CHILE

Type	Designation	Manufacturer	Country
Lt. Bmr/Tac/Attack	Invader B-26 (JD).....	Douglas.....	U.S.A.
Fighter.....	Shooting Star F-80C (F-80).....	Lockheed.....	U.S.A.
Transport.....	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
Trainer.....	Vampire T-55.....	de Havilland.....	U.K.
	Shooting Star T-33 (F-80).....	Lockheed.....	U.S.A.
	Texan T-6 (SNJ).....	North American.....	U.S.A.
	Kansas T-11 (SNB-1).....	Beech.....	U.S.A.
	Mentor T-34.....	Beech.....	U.S.A.
	Valiant BT-13.....	Convair (Consolidated-Vultee).....	U.S.A.
	Yellow Peril N3N.....	Naval Aircraft Factory.....	U.S.A.
Helicopter.....	H-19 Chickasaw.....	Sikorsky.....	U.S.A.
	H-13 Sioux.....	Bell.....	U.S.A.
	Hiller E-12.....	Hiller.....	U.S.A.
Miscellaneous.....	Albatross SA-16.....	Grumman.....	U.S.A.
	Catalina PBY-5/5A.....	Convair.....	U.S.A.
	Expeditor C-45 (JRB).....	Beech.....	U.S.A.
	Navion L-17.....	Ryan.....	U.S.A.
	Bird Dog L-19H.....	Cessna.....	U.S.A.
	Beaver L-20.....	de Havilland.....	Canada.
	Otter.....	de Havilland.....	Canada.
	Cessna 182.....	Cessna.....	U.S.A.
	Twin Bonanza.....	Beech.....	U.S.A.

CHILE (NAVAL AIR ARM)

The Naval Air Force

Naval Aviation in Chile is an integral part of the Navy. It is a small force composed mostly of helicopters.

Type	Designation	Manufacturer	Country
Helicopter.....	Bell B-47G.....	Bell.....	U.S.A.
Miscellaneous.....	Beechcraft D-18.....	Beech.....	U.S.A.

CHINA, COMMUNIST

The Chinese Communist Air Force

The air force of Communist China is fashioned after the Air Force of the Soviet Army. It is on the level of the Chinese Communist Army and Navy. These forces are responsible to the supreme military command of the People's Liberation Army Headquarters.

Type	Designation	Manufacturer	Country
Fighters.....	Fagot MIG-15.....	Mikoyan & Gurevich.....	U.S.S.R.
	Fresco MIG-17.....	Mikoyan & Gurevich.....	U.S.S.R.
	Fresco D MIG-17.....	Mikoyan & Gurevich.....	U.S.S.R.
	Farmer MIG-19.....	Mikoyan & Gurevich.....	U.S.S.R.
Light Bomber.....	Beagle Il-28.....	Ilyushin.....	U.S.S.R.
	Bat TU-2.....	Tupolev.....	U.S.S.R.
Medium Bomber.....	Bull TU-4.....	Tupolev.....	U.S.S.R.
Reconnaissance.....	Madge BE-6.....	Beriev.....	U.S.S.R.
Transport.....	Crate Il-14.....	Ilyushin.....	U.S.S.R.
	Coach Il-12.....	Ilyushin.....	U.S.S.R.
	Cab Li-2.....	Lisitsin.....	U.S.S.R.
Helicopter.....	Hound Mi-4.....	Mil.....	U.S.S.R.
Trainer.....	Midget U-MIG-15.....	Mikoyan & Gurevich.....	U.S.S.R.

The Naval Air Force

The Chinese Communist Naval Air Force is an integral part of the Navy. Its general development has followed the same pattern as Soviet naval aviation. Like the Soviet Navy, the Chinese Navy has no aircraft carriers. The aircraft listed above for the Air Force apply also for the Navy.

CHINA, NATIONALIST

Type	Designation	Manufacturer	Country
Fighter.....	Sabre F-86F (FJ2).....	North American.....	U.S.A.
	Super Sabre F-100A.....	North American.....	U.S.A.
	Super Sabre F-100F.....	North American.....	U.S.A.
	Starfighter F-104B.....	Lockheed.....	U.S.A.
Lt/Tac/Attack Bmr.....	Mitchell B-25 (PBJ).....	North American.....	U.S.A.
Reconnaissance.....	RF-84F.....	Republic.....	U.S.A.
	Super Sabre RF-100A.....	North American.....	U.S.A.
	Voodoo RF-101A.....	McDonnell.....	U.S.A.
Transport.....	Canberra RB-57.....	Martin.....	U.S.A.
	Packet C-119G.....	Fairchild.....	U.S.A.
	Commando C-46 (R5C).....	Curtiss.....	U.S.A.
	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
Trainer.....	Skymaster C-54 (R5D).....	Douglas.....	U.S.A.
	Shooting Star T-33A (F-80).....	Lockheed.....	U.S.A.
	Texan T-6 (SNJ).....	North American.....	U.S.A.
	Kaydet PT-17.....	Stearman.....	U.S.A.
Helicopter.....	Trojan T-28A.....	North American.....	U.S.A.
	Chickasaw H-19B.....	Sikorsky.....	U.S.A.
	Privateer P4Y2.....	Convair.....	U.S.A.
Miscellaneous.....	Albatross SA-16.....	Grumman.....	U.S.A.

COLOMBIA

Type	Designation	Manufacturer	Country
Fighter	Sabre Mk.-6	Canadair	Canada.
	Shooting Star F-80 (T-33)	Lockheed	U.S.A.
	Thunderbolt F-47	Republic	U.S.A.
Light Bomber	Invader B-26	Douglas	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Lodestar C-60 (R5V)	Lockheed	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
Trainer	Texan T-6 (SNJ)	North American	U.S.A.
	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Navigator T-7 (SNB-2)	Beech	U.S.A.
	Kansas T-11 (SNB-1)	Beech	U.S.A.
	Mentor T-34	Beech	U.S.A.
	Chipmunk T-20	de Havilland	U.K.
	Sioux H-13	Bell	U.S.A.
Helicopter	Raven H-23	Hiller	U.S.A.
Miscellaneous	Expedito C-45 (JRB)	Beech	U.S.A.
	Catalina PBY	Convair	U.S.A.
	Beaver L-20	de Havilland	Canada.
	Cessna	Cessna	U.S.A.
	Aero Commander	Aero	U.S.A.

COSTA RICA

Type	Designation	Manufacturer	Country
Fighter	Mustang F-51	North American	U.S.A.
Miscellaneous	Cessna 180	Cessna	U.S.A.

CUBA

Type	Designation	Manufacturer	Country
Fighter	Mustang F-51	North American	U.S.A.
	Thunderbolt F-47	Republic	U.S.A.
	Sea Fury Mk. 1	Hawker	U.K.
Light Bomber	Invader B-26 (JD)	Douglas	U.S.A.
ASW	Avenger TBM-35	General Motors	U.S.A.
Transport	Colt AN-2	Antonov	U.S.S.R.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Commando C-46 (R5C)	Curtiss	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Lodestar C-60 (R5V)	Lockheed	U.S.A.
	Chickasaw H-19	Sikorsky	U.S.A.
Helicopter	Hound MI-4	Mil	U.S.S.R.
	Sioux H-13	Bell	U.S.A.
	Hare MI-1	Mil	U.S.S.R.
	UH-12	Hiller	U.S.A.
Trainer	Z-326	Czechoslovak	Czech.
	Yellow Peril N2S	Boeing	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
Miscellaneous	Catalina PBY-5A	Convair	U.S.A.
	Cessna 310	Cessna	U.S.A.
	Expeditor C-45 (JRB)	Beech	U.S.A.
	Beaver L-20	de Havilland	Canada.

CZECHOSLOVAKIA

Type	Designation	Manufacturer	Country
Fighter	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Fresco D MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Fagot MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Farmer MIG-19	Mikoyan & Gurevich	U.S.S.R.
Light Bomber	Beagle Il-28	Ilyushin	U.S.S.R.
	Beast Il-10	Ilyushin	U.S.S.R.
	Bat TU	Tupolev	U.S.S.R.
Transport	Cab Li-2	Lisitsin	U.S.S.R.
	Coach Il-12	Ilyushin	U.S.S.R.
Trainer	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.

DENMARK

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86D	North American	U.S.A.
	Meteor NF-11	Gloster	U.K.
	Hunter F Mk. 51	Hawker	U.K.
	Meteor F8	Gloster	U.K.
	Super Sabre F-100D	North American	U.S.A.
	Thunderjet F-84G	Republic	U.S.A.
Reconnaissance	Thunderstreak RF-84F	Republic	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
Trainer	Super Sabre F-100F	North American	U.S.A.
	Hunter T-53	Hawker	U.K.
	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Meteor T Mk. 7	Gloster	U.K.
	Harvard T-6 (SNJ)	North American	U.S.A.
	Chipmunk T-30	de Havilland	U.K.
	Firefly TT-1	Fairey	U.K.
	Catalina PBV-5A	Convair	U.S.A.
	Pembroke C-52	Percival	U.K.
	KZ-7	S.A.I.	Denmark.
Miscellaneous	Cub LC-18	Piper	U.S.A.

DOMINICAN REPUBLIC

Type	Designation	Manufacturer	Country
Fighter	Mustang F-51	North American	U.S.A.
	Vampire Mk. 1	de Havilland	U.K.
	Vampire Mk. 2	de Havilland	U.K.
Light Bomber	Invader B-26 (JD)	Douglas	U.S.A.
	Mitchell B-25	North American	U.S.A.
Transport	Commando C-46A (R5C)	Curtiss	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
	Raven H-23	Hiller	U.S.A.
	Alouette II	Sud-Aviation	France.
Trainer	Texan T-6	North American	U.S.A.
	N2S PT-17	Stearman	U.S.A.
Miscellaneous	Catalina PBV	Convair	U.S.A.
	Expedito C-45 (JRB)	Beech	U.S.A.
	Cessna 170	Cessna	U.S.A.
	Beaver L-20	de Havilland	Canada.
	Aero Commander	Aero	U.S.A.

ECUADOR

Type	Designation	Manufacturer	Country
Fighter	Meteor Mk. 8	Gloster	U.K.
	Shooting Star F-80C	Lockheed	U.S.A.
	Thunderbolt F-47	Republic	U.S.A.
Light Bomber	Canberra B-6	Eng. Elec.	U.K.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Trainer	Harvard T-6 (SNJ)	North American	U.S.A.
	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Mentor T-34	Beech	U.S.A.
Miscellaneous	Expeditor C-45 (JRB)	Beech	U.S.A.
	Catalina PBY	Convair	U.S.A.

EGYPT

Type	Designation	Manufacturer	Country
Fighter	Fagot MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
Light Bomber	Beagle Il-28	Ilyushin	U.S.S.R.
Transport	Crate Il-14	Ilyushin	U.S.S.R.
	Commando C-46 (R5C)	Curtiss	U.S.A.
Helicopter	Hound Mi-4	Mil	U.S.S.R.
	Hare Mi-1	Mil	U.S.S.R.
Trainer	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Mascot U Il-28	Ilyushin	U.S.S.R.
	Moose YAK-11	Yakovlev	U.S.S.R.
	Max YAK-18	Yakovlev	U.S.S.R.
	Harvard T-6	North American	U.S.A.
	El Gomhoria	Heliopolis	Egypt.
	Chipmunk T-10	de Havilland	U.K.
Miscellaneous	Expeditor C-45 (JRB)	Beech	U.S.A.
	Devon C-1	de Havilland	U.K.
	Bonanza	Beech	U.S.A.
	Mallard G-73	Grumman	U.S.A.

EL SALVADOR

Type	Designation	Manufacturer	Country
Fighter	Corsair F4U	Chance-Vought	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Trainer	Texan T-6 (SNJ)	North American	U.S.A.
	Valiant BT-13 (SNV)	Convair	U.S.A.
	Mentor T-34	Beech	U.S.A.
Miscellaneous	Cessna 180	Cessna	U.S.A.
	Cessna 182	Cessna	U.S.A.

ETHIOPIA

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86F	North American	U.S.A.
Light Bomber	SAAB-17	SAAB	Sweden.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Crate Il-14	Ilyushin	U.S.S.R.
Trainer	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Safir SAAB 91	SAAB	Sweden.
Miscellaneous	Sentinel L-5 (OY)	Convair	U.S.A.
	Bobcat T-50	Cessna	U.S.A.
	Devon C-1	de Havilland	U.K.

FINLAND

Type	Designation	Manufacturer	Country
Fighter	Gnat FO-141	Folland	U.K.
	Vampire FB-52	de Havilland	U.K.
Light Bomber	Blenheim	Bristol	U.K.
	Beagle Il-28	Ilyushin	U.S.S.R.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	Hare Mi-1	Mil	U.S.S.R.
Trainer	Magister CM-170R	Potez-Air Fouga	France.
	Vampire T-55	de Havilland	U.K.
	Pry	Valmet	Finland.
	Viima	Valmet	Finland.
	Safir 91	SAAB	Sweden.
Miscellaneous	Beaver L-20	de Havilland	U.K.
	Pembroke	Percival	U.K.
	Traveler	Beech	U.S.A.

GERMANY, EAST

Type	Designation	Manufacturer	Country
Fighter	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Fresco D-MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Farmer MIG-19	Mikoyan & Gurevich	U.S.S.R.
Transport	Coach Il-12	Ilyushin	U.S.S.R.
	Crate Il-14	Ilyushin	U.S.S.R.
Helicopter	Hound Mi-4	Mil	U.S.S.R.
Trainer	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.

GERMANY, WEST

(AIR FORCE)

Type	Designation	Manufacturer	Country
Fighter			
All-Weather	Sabre F-86K	North American	U.S.A.
Day	Sabre 5 & 6	Canadair	Canada.
Fighter-Bomber	Thunderstreak F-84F	Republic	U.S.A.
Transport	Noratlas	Nord	France.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Heron C-2	de Havilland	U.K.
	Convair 240	Convair	U.S.A.
Helicopter	Work Horse H-21	Vertol	U.S.A.
	Choctaw H-34	Sikorsky	U.S.A.
	Sioux H-13	Bell	U.S.A.
	Sycamore HR-52	Bristol	U.K.
	Alouette II	Sud-Aviation	France.
Trainer	Starfighter F-104F	Lockheed	U.S.A.
	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Magister CM-170	Potez-Air Fouga	France.
	Harvard T-6 (SNJ)	North American	U.S.A.
	P-149	Piaggio	Italy.
Miscellaneous	Pembroke C-54	Hunting	U.K.
	Cub L-18	Piper	U.S.A.
	Do-27	Dornier	Germany.

GERMANY, WEST (ARMY AVIATION)

Type	Designation	Manufacturer	Country
Helicopter			
	Alouette II	Sud-Aviation	France.
	Djinn SO 1221	Sud-Aviation	France.
	Skeeter Mk. 51	Saunders-Roe	U.K.
	Sioux H-13	Bell	U.S.A.
	Work Horse H-21	Vertol	U.S.A.
	Choctaw H-34	Sikorsky	U.S.A.
Miscellaneous	Do-27	Dornier	Germany.

GERMANY, WEST (NAVAL AIR ARM)

Type	Designation	Manufacturer	Country
Fighter-Bomber	Sea Hawk	Hawker	U.K.
ASW	Gannet AS4	Fairey	U.K.
Helicopter	Sycamore Mk. 52	Bristol	U.K.
Trainer	Magister CM-170	Potez-Air Fouga	France.
	Gannet T-6	Fairey	U.K.
Miscellaneous	Albatross SA-16	Grumman	U.S.A.
	Do-27	Dornier	Germany.
	Pembroke C-1	Hunting	U.K.

GREECE

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86E	Canadair	Canada
	Thunderstreak F-84F	Republic	U.S.A.
Reconnaissance	Thunderstreak RF-84F	Republic	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
Trainer	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.

GUATEMALA

Type	Designation	Manufacturer	Country
Fighter	Mustang F-51	North American	U.S.A.
Light Bomber	Invader B-26	Douglas	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Trainer	Texan T-6 (SNJ)	North American	U.S.A.
	Kansas T-11 (SNB-1)	Beech	U.S.A.
	Mustang TF-51	North American	U.S.A.
Miscellaneous	Expeditor C-45 (JRB)	Beech	U.S.A.
	Cessna 170	Cessna	U.S.A.
	Cessna 180	Cessna	U.S.A.
	Aero Commander	Aero	U.S.A.

HAITI

Type	Designation	Manufacturer	Country
Fighter	Mustang F-51	North American	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Trainer	Texan T-6 (SNJ)	North American	U.S.A.
	Kansas T-11 (SNB)	Beech	U.S.A.
	Cornell PT-19	Fairchild	U.S.A.

HONDURAS

Type	Designation	Manufacturer	Country
Fighter	Corsair F4U	Chance-Vought	U.S.A.
	Lightning F-38	Lockheed	U.S.A.
	King Cobra F-63	Bell	U.S.A.
ASW	Privateer P4Y	Convair	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Commando C-46 (R5C)	Curtiss	U.S.A.
	Flying Boxcar C-82	Fairchild	U.S.A.
Trainer	Texan T-6 (SNJ)	North American	U.S.A.
	Kansas AT-11 (SNB)	Beech	U.S.A.
	Lightning TF-38	Lockheed	U.S.A.
	Texan BC-1 (SNJ)	North American	U.S.A.
Miscellaneous	Super Cub PA-23	Piper	U.S.A.
	L-13	Convair	U.S.A.

HUNGARY

Type	Designation	Manufacturer	Country
Fighter	Fagot MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Farmer MIG-19	Mikoyan & Gurevich	U.S.S.R.
Light Bomber	Beagle Il-28	Ilyushin	U.S.S.R.
Transport	Coach Il-12	Ilyushin	U.S.S.R.
	Crate Il-14	Ilyushin	U.S.S.R.
	Cab Li-2	Lisitsin	U.S.S.R.
Helicopter	Hound MI-4	Mil	U.S.S.R.
Trainer	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.

INDIA

Type	Designation	Manufacturer	Country
Fighter	Vampire NF-10	de Havilland	U.K.
	Mystère IVA	Dassault	France.
	Hunter F-6	Hawker	U.K.
	Gnat FO-141	Folland	U.K.
	Toofani	Dassault	France.
Light Bomber	Canberra	English Electric	U.K.
Reconnaissance	Canberra PR-7	English Electric	U.K.
Transport	Packet C-119 (R4Q)	Fairchild	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Liberator Express C-87	Douglas	U.S.A.
	Viscount	Vickers	U.K.
	Crate Il-14	Ilyushin	U.S.S.R.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
	Sioux H-13	Bell	U.S.A.
Trainer	Hunter T-7	Hawker	U.K.
	Jet Provost T-1	Hunting	U.K.
	Vampire T-11	de Havilland	U.K.
	Canberra T-4	English Electric	U.K.
	Tiger Moth	de Havilland	U.K.
	Prentice T-3	Hindustan	India.
	HT-2	Hindustan	India.
	Texan T-6 (SNJ)	North American	U.S.A.
	Aero 45	Aero	Czech.
Miscellaneous	Devon C-1	de Havilland	U.K.
	Otter DHC-3	de Havilland	U.K.
	Auster A.O.P. 6	Auster	U.K.

INDIAN NAVAL AIR FORCE

Type	Designation	Manufacturer	Country
Trainer	HT-2	Hindustan	India.
	Vampire T-11	de Havilland	U.K.
Miscellaneous	Firefly Mk. 1	Fairey	U.K.
	Sealand SA-6	Short	U.K.

INDONESIA

Type	Designation	Manufacturer	Country
Fighter	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Mustang F-51	North American	U.S.A.
	LA-11	Lavochkin	U.S.S.R.
Light Bomber	Mitchell B-25	North American	U.S.A.
	Beagle Il-28	Ilyushin	U.S.S.R.
	Invader B-26	Douglas	U.S.A.
	Bat TU-2	Tupolev	U.S.S.R.
Transport	Hercules C-130B	Lockheed	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Crate Il-14	Ilyushin	U.S.S.R.
Helicopter	Hound Mi-4	Mil	U.S.S.R.
	Hare Mi-1	Mil	U.S.S.R.
	Ranger 47	Bell	U.S.A.
	UH-12	Hiller	U.S.A.
	Sioux H-13	Bell	U.S.A.
Trainer	Midget MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Vampire T-55	de Havilland	U.K.
	Texan T-6	North American	U.S.A.
	LA-9	Lavochkin	U.S.S.R.
	HT-2	Hindustan	India.
Miscellaneous	Albatross SA-16 (UF)	Grumman	U.S.A.
	Catalina PBY-5A	Convair	U.S.A.
	Cessna 180	Cessna	U.S.A.
	Norseman C-64B	Canadian Car & Foundry	Canada.
	C-40	Lockheed	U.S.A.
	Bee NU-200	I.A.F. R.D. & P.D.	Indonesia.
	Bee NU-225	I.A.F. R.D. & P.D.	Indonesia.
	Grasshopper L-4J	Piper	U.S.A.

IRAN

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86F	North American	U.S.A.
	Thunderjet F-84G	Republic	U.S.A.
Reconnaissance	Shooting Star RT-33 (F-80)	Lockheed	U.S.A.
Transport	Skytrain C-47A (R4D)	Douglas	U.S.A.
Trainer	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
	Harvard LT-6G (SNJ)	North American	U.S.A.
	Harvard RLT-6G (SNJ)	North American	U.S.A.

IRAQ

Type	Designation	Manufacturer	Country
Fighter	Fresco MIG-17		
	Hunter F-6	Hawker	U.K.
	Venom FB-1	de Havilland	U.K.
	Vampire FB-5	de Havilland	U.K.
Light Bomber	Sea Fury FB-11	Hawker	U.K.
	Beagle II-28	Ilyushin	U.S.S.R.
Transport	Freighter	Bristol	U.K.
	Heron 2 (DH-114)	de Havilland	U.K.
Helicopter	Hound Mi-4	Mil	U.S.S.R.
	Dragonfly HR-1	Westland	U.K.
Trainer	Vampire T-55	de Havilland	U.K.
	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Sea Fury T-20	Hawker	U.K.
	Chipmunk	de Havilland	U.K.
Miscellaneous	Harvard T-6 (SNJ)	North American	U.S.A.
	Provost T-1	Percival	U.K.
	Devon C-1	de Havilland	U.K.
	Auster Mk. 5	Auster	U.K.
	Cessna L-19A	Cessna	U.S.A.
	Cub	Piper	U.S.A.

IRELAND

Type	Designation	Manufacturer	Country
Trainer	Chipmunk T-10	de Havilland	U.K.
	Provost T-53	Percival	U.K.
	Spitfire T-9	Vickers	U.K.
	Vampire T-55	de Havilland	U.K.
Miscellaneous	Anson 19	A. V. Roe	Canada.
	Devon C-1	de Havilland	U.K.

ISRAEL

Type	Designation	Manufacturer	Country
Fighter	Meteor NF-13	Armstrong-Whitworth	U.K.
	Vautour IIN	Sud-Aviation	France.
	Super Mystère IVB-2	Dassault	France.
	Mystère IVA	Dassault	France.
	Vautour IIA	Sud-Aviation	France.
	Meteor F-8	Gloster	U.K.
	Mustang F-51	North American	U.S.A.
	Ouragan M.D. 450	Dassault	France.
	Vautour IIB	Sud-Aviation	France.
	Skystrain C-47 (R4D)	Douglas	U.S.A.
Light Bomber	Noratlac	Nord	France.
	Choctaw H-34	Sikorsky	U.S.A.
Transport	Chickasaw H-19	Sikorsky	U.S.A.
	Alouette II	Sud-Aviation	France.
Trainer	Meteor T-7	Gloster	UK.
	Magister CM-170	Fouga	France.
	Texan T-6 (SNJ)	North American	U.S.A.
Miscellaneous	Super Cub PA-18	Piper	U.S.A.

ITALY

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86K	Fiat	Italy.
	Sea Vixon DH-110	de Havilland	U.K.
	Sabre F-86E	Canadair	Canada.
	Mustang F-51	North American	U.S.A.
	Thunderstreak F-84F	Republic	U.S.A.
	G-91	Fiat	Italy.
	Vampire DH-100	de Havilland	U.S.A.
Reconnaissance	Thunderstreak RF-84F	Republic	U.S.A.
	G-91R	Fiat	Italy.
	Shooting Star RT-33A (F-80)	Lockheed	U.S.A.
ASW	Sentinel S2F-1	Grumman	U.S.A.
Transport	Packet C-119C	Fairchild	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Sky Trooper C-53	Douglas	U.S.A.
	Convair 440	Convair	Canada.
	SM-82	S.I.A.I.-Marchetti	Italy.
Helicopter	Chickasaw H-19D	Sikorsky	U.S.A.
	Bell 47J	Augusta	Italy.
	Choctaw HSS-1	Sikorsky	U.S.A.
Trainer	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	G-46	Fiat	Italy.
	G-59	Fiat	Italy.
	G-82	Fiat	Italy.
	M-416	Macchi	Italy.
	P-148	Piaggio	Italy.
	G-49	Fiat	Italy.
	MB-326	Macchi	Italy.
	SM-102	S.I.A.I.-Marchetti	Italy.
Miscellaneous	Albatross SA-16A	Grumman	U.S.A.
	Expeditor C-45 (JRB)	Beech	U.S.A.

JAPAN

The Japanese Air Self Defense Force

The Japanese Air Force is called the Air Self Defense Force (ASDF). It was established on 1 July 1954.

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86D, F	North American	U.S.A.
Transport	Commando C-46 (R5C)	Curtiss	U.S.A.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
	Work Horse H-21B	Vertol	U.S.A.
Trainer	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Mentor T-34	Beech	U.S.A.
	Trojan T-28	North American	U.S.A.
	Vampire T-11	de Havilland	U.S.A.
	T1A	Fuji	Japan.
Miscellaneous	KAL-1	Kawasaki	Japan.

Naval Air Force

JAPAN (NAVAL AIR FORCE)

The Japanese Naval Air Force is known as the Maritime Self Defense Force Air Force. It operates under the Navy.

Type	Designation	Manufacturer	Country
ASW.....	Tracker S2F-1.....	Grumman.....	U.S.A.
	Neptune P2V-7.....	Lockheed.....	U.S.A.
Trainer.....	Avenger TBM.....	General Motors.....	U.S.A.
	Harpoon PV-2.....	Lockheed.....	U.S.A.
	Expeditor JRB-4.....	Beech.....	U.S.A.
	Texan SNJ (T-6).....	North American.....	U.S.A.
	Mentor T-34.....	Beech.....	U.S.A.
	KAL.....	Kawasaki.....	Japan.
	Skytrain R4D-6 (C-47).....	Douglas.....	U.S.A.
Transport.....	Skytrain R4D-6 (C-47).....	Douglas.....	U.S.A.
	Catalina PBY-6.....	Convair.....	U.S.A.
	Goose JRF.....	Grumman.....	U.S.A.
Helicopter.....	HO4S-1 (S-55).....	Sikorsky.....	U.S.A.
	HSS-1.....	Sikorsky.....	U.S.A.
	HTL-6.....	Bell.....	U.S.A.
	HO3S-1 (S-51).....	Sikorsky.....	U.S.A.

JAPAN (THE GROUND SELF DEFENSE FORCE)

Type	Designation	Manufacturer	Country
Helicopter.....	Chickasaw H-19.....	Sikorsky.....	U.S.A.
	Work Horse H-21.....	Vertol.....	U.S.A.
	Sioux H-13.....	Bell.....	U.S.A.
Miscellaneous.....	Bird Dog L-19.....	Cessna.....	U.S.A.
	L-21.....	Piper.....	U.S.A.
	KAL-1.....	Kawasaki.....	Japan.
	LM-1.....	Fuji.....	Japan.

JORDAN

Type	Designation	Manufacturer	Country
Fighter	Hunter F-6	Hawker	U.K.
	Vampire FB-9	de Havilland	U.K.
	Vampire FB-52	de Havilland	U.K.
Transport	Ambassador AS-57	Airspeed (Div. of de Havilland)	U.K.
	Heron 2	de Havilland	U.K.
Helicopter	Widgeon	Westland	U.K. (License from Sikorsky)
	Whirlwind	Westland	U.K. (License from Sikorsky)
Trainer	Hunter T-66	Hawker	U.K.
	Vampire T-55	de Havilland	U.K.
	Auster T-7	Auster	U.K.
	Autocrat J-1	Auster	U.K.
	Chipmunk T-10	de Havilland	U.K.
Miscellaneous	El Gomhoria	Heliopolis	Egypt.
	Twin Bonanza	Beech	U.S.A.
	Devon C-1	de Havilland	U.K.

KOREA, NORTH

Type	Designation	Manufacturer	Country
Fighters	Fagot MIG-15	Mikoyan & Gurevich	U.S.S.R.
	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Fresco D MIG-17	Mikoyan & Gurevich	U.S.S.R.
Light Bomber	Beagle Il-28	Ilyushin	U.S.S.R.
	Bat TU-2	Tupolev	U.S.S.R.
Transport	Crate Il-14	Ilyushin	U.S.S.R.
	Coach Il-12	Ilyushin	U.S.S.R.
	Cab Li-2	Lisitsin	U.S.S.R.
Helicopter	Hound Mi-4	Mil	U.S.S.R.
Trainer	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.

KOREA, SOUTH

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86D, F	North American	U.S.A.
Transport	Commando C-46 (R5C)	Curtiss	U.S.A.
Helicopter	Sikorsky H-19 (S-55)	Sikorsky	U.S.A.
Trainer	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	T-28	North American	U.S.A.
Miscellaneous	Bird Dog L-19	Cessna	U.S.A.
	Commander 520 (L-26)	Aero	U.S.A.
	Cessna 180	Cessna	U.S.A.

LAOS

Type	Designation	Manufacturer	Country
Transport.....	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
Helicopter.....	Alouette II.....	Republic.....	U.S.A.
	Choctaw H-34.....	Sikorsky.....	U.S.A.
Trainer.....	Texan T-6 (SNJ).....	North American.....	U.S.A.
Miscellaneous.....	Bird Dog L-19.....	Cessna.....	U.S.A.
	Beaver L-20.....	de Havilland.....	U.K.

LEBANON

The Lebanese Air Force

The Lebanese Air Force is an integral part of the Lebanese Army.

Type	Designation	Manufacturer	Country
Fighter.....	Hunter F-6.....	Hawker.....	U.K.
	Vampire FB-9.....	de Havilland.....	U.K.
Trainer.....	Vampire T-55.....	de Havilland.....	U.K.
	Chipmunk T-20.....	de Havilland.....	U.K.
	Prentice T-1.....	Percival.....	U.K.
Miscellaneous.....	Devon C-1.....	de Havilland.....	U.K.

MALAYA

Type	Designation	Manufacturer	Country
Transport.....	Twin Pioneer CC-1.....	Scottish Aviation.....	U.K.
Trainer.....	Chipmunk T-10.....	de Havilland.....	U.K.
Miscellaneous.....	Pioneer CC-1.....	Scottish Aviation.....	U.K.

MEXICO

Type	Designation	Manufacturer	Country
Fighter.....	Vampire F-6.....	de Havilland.....	U.K.
	Thunderbolt F-47.....	Republic.....	U.S.A.
Attack Bomber.....	SBD-5 (A-24).....	Douglas.....	U.S.A.
Transport.....	Skymaster C-54 (R5D).....	Douglas.....	U.S.A.
	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
Trainer.....	Trojan T-28.....	North American.....	U.S.A.
	Texan T-6 (SNJ).....	North American.....	U.S.A.
	Kansas T-11 (SNB-1).....	Beech.....	U.S.A.
	Navigator T-7 (SNB-2).....	Beech.....	U.S.A.
	Kaydet PT-17 (N2S).....	Stearman.....	U.S.A.
Miscellaneous.....	Expeditor C-45 (JRB).....	Beech.....	U.S.A.

MEXICO (NAVAL AIR ARM)

Type	Designation	Manufacturer	Country
Helicopter	Bell 47 HTL	Bell	U.S.A.
Trainer	Kaydet N2S5 (PT-17)	Stearman	U.S.A.
	Mentor T-34	Beech	U.S.A.
	Expeditor JRB-4 (C-45)	Beech	U.S.A.
	Catalina PBY-5	Consolidated	U.S.A.
	Sentinel L-5	Stinson	U.S.A.
	Cessna 180	Cessna	U.S.A.

MOROCCO

Type	Designation	Manufacturer	Country
Fighter	Fresco MIG-17	Mikoyan & Gurevich	U.S.S.R.
	Sea Fury	Hawker	U.K.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Heron	de Havilland	U.K.
Helicopter	Sioux H-13	Bell	U.S.A.
Trainer	El Gomhoria Mk. 2	Heliopolis	Egypt.
	MS-733	Morane Saulnier	France.
	Midget U-MIG-15	Mikoyan & Gurevich	U.S.S.R.
Miscellaneous	MH-1521	Holste	France.
	Twin Bonanza	Beech	U.S.A.
	Bonanza	Beech	U.S.A.

NETHERLANDS

(AIR FORCE)

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86K	Fiat	Italy.
	Hunter Mk. IV	Hawker	U.K.
	Hunter Mk. VI	Hawker	U.K.
	Thunderstreak F-84F	Republic	U.S.A.
Reconnaissance	Thunderflash RF-84F	Republic	U.S.A.
	Shooting Star RT-33A (F-80)	Lockheed	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Friendship F-27	Fokker	Netherlands.
Trainer	Meteor Mk. VII	Gloster	U.K.
	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
	S-14	Fokker	Netherlands.
	S-11	Fokker	Netherlands.
	Harvard T-6 (SNJ)	North American	U.S.A.
	Tiger Moth II	de Havilland	U.K.
Helicopter	Alouette	Sud-Aviation	France.
	Kolibri	Borgward	Germany.

NETHERLANDS (NAVAL AIR ARM)

Type	Designation	Manufacturer	Country
ASW.....	Avenger TBM.....	General Motors.....	U.S.A.
	Tracker S2F-1.....	Grumman.....	U.S.A.
	Tracker CS2F-1.....	de Havilland.....	Canada.
	Neptune P2V-5.....	Lockheed.....	U.S.A.
Fighter.....	Sea Hawk.....	Hawker.....	U.K.
	Firefly Mk. 4, 5.....	Fairey.....	U.K.
Trainer.....	Meteor T-7.....	Gloster.....	U.K.
	Fokker S-11.....	Fokker.....	Netherlands.
	Navigator SNB-2 (T-7).....	Beech.....	U.S.A.
	Texan SNJ (T-6).....	North American.....	U.S.A.
	Tiger Moth.....	de Havilland.....	U.K.
Helicopter.....	Sikorsky S-55 (HO4S).....	Sikorsky.....	U.S.A.
	HSS-1N.....	Sikorsky.....	U.S.A.

NEW ZEALAND

Type	Designation	Manufacturer	Country
ASW.....	Sunderland Mk. 5.....	Short.....	U.K.
Fighter.....	Vampire Mk. 5.....	de Havilland.....	U.K.
Light Bomber.....	Canberra B-2, B-12.....	English Electric.....	U.K.
Transport.....	Hastings Mk. 3.....	Handley-Page.....	U.K.
	Freighter Mk. 31.....	Bristol.....	U.K.
Trainer.....	Dakota C-47B (R4D).....	Douglas.....	U.S.A.
	Vampire T-55.....	de Havilland.....	U.K.
	Canberra T-4, T-13.....	English Electric.....	U.K.
	Harvard T-6 (SNJ).....	North American.....	U.S.A.
Miscellaneous.....	Devon.....	de Havilland.....	U.K.
	Auster.....	Auster.....	U.K.

NICARAGUA

Type	Designation	Manufacturer	Country
Fighter.....	Mustang F-51.....	North American.....	U.S.A.
	Thunderbolt F-47.....	Republic.....	U.S.A.
Light Bomber.....	Havoc A-20.....	Douglas.....	U.S.A.
	Liberator B-24.....	Convair (Consolidated-Vultee).....	U.S.A.
Trainer.....	Mustang TF-51.....	North American.....	U.S.A.
	Texan T-6 (SNJ).....	North American.....	U.S.A.
Miscellaneous.....	Expeditor C-45 (JRB).....	Beech.....	U.S.A.
	Cessna 172.....	Cessna.....	U.S.A.

NORWAY

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86F	North American	U.S.A.
	Sabre F-86K	Fiat	Italy (License).
Reconnaissance	Thunderflash F-84F	Republic	U.S.A.
Transport	Packet C-119 (R4Q)	Fairchild	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	H-19 Sikorsky S-55	Sikorsky	U.S.A.
	H-13 Bell-47 (HTL)	Bell	U.S.A.
Trainer	Shooting Star F-80 (T-33)	Lockheed	U.S.A.
	Safir 91	SAAB	Sweden.
Miscellaneous	Catalina PBY-5A	Convair (Consolidated-Vultee)	U.S.A.
	Norseman C-64	Canadair	Canada.
	Otter DHC-3	de Havilland	U.K.
	Piper Cub	Piper	U.S.A.

PAKISTAN

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86F	North American	U.S.A.
	Fury FB-60	Hawker	U.K.
Light Bomber	Canberra B-57B	Martin	U.S.A.
	Freighter	Bristol	U.K.
Transport	Viscount	Vickers	U.K.
	Shooting Star RT-33A	Lockheed	U.S.A.
Reconnaissance	H-19D Sikorsky S-55	Sikorsky	U.S.A.
Helicopter	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
	Canberra B-57C	Martin	U.S.A.
Trainer	Texan T-6 (SNJ)	North American	U.S.A.
	Dual Fury T-61	Hawker	U.K.
Miscellaneous	Aiglet	Auster	U.K.
	Albatross SA-16 (UF)	Grumman	U.S.A.
	Dove	de Havilland	U.K.

PARAGUAY

Type	Designation	Manufacturer	Country
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	H-13 Bell-47 (HTL)	Bell	U.S.A.
Trainer	Texan T-6 (SNJ)	North American	U.S.A.
	Kansas T-11 (SNB-1)	Beech	U.S.A.
Miscellaneous	Valiant SNV-1	Convair (Consolidated-Vultee)	U.S.A.
	Cornell PT-19	Fairchild	U.S.A.
	Bonanza	Beech	U.S.A.
	Aeronca Sedan L-16	Aeronca	U.S.A.
	Piper Cub L-4	Piper	U.S.A.
	Sentinel L-5	Convair-Stinson	U.S.A.
	Cessna 180	Cessna	U.S.A.
	Expeditor C-45 (JRB)	Beech	U.S.A.
	Norseman C-64	Canadair	Canada.
	Catalina PBY-5A	Convair (Consolidated-Vultee)	U.S.A.

PERU

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86	North American	U.S.A.
	Hunter MK. IV	Hawker	U.K.
	Thunderbolt F-47D	Republic	U.S.A.
Light Bomber	Canberra MK. VIII	English Electric	U.K.
	Mitchell B-25 (PBJ)	North American	U.S.A.
	Invader B-26 (JD)	Douglas	U.S.A.
Transport	Commando C-46 (R5C)	Curtiss	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Alouette	Sud-Aviation	France.
Helicopter	H-13 Bell-47 (HTL)	Bell	U.S.A.
	H-23 Hiller UH-12	Hiller	U.S.A.
	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
Trainer	Hunter T-6	Hawker	U.K.
	Texan T-6 (SNJ)	North American	U.S.A.
	Navigator T-7 (SNB-2)	Beech	U.S.A.
Miscellaneous	Kansas T-11 (SNB-1)	Beech	U.S.A.
	Kaydet T-17	Stearman	U.S.A.
	Dragon Rapide	de Havilland	U.K.
	Ventura B-34 (PV-1)	Vega	U.S.A.
	Lodestar	Lockheed	U.S.A.
	Expeditor C-45 (JRB)	Beech	U.S.A.
	Bobcat UC-78	Cessna	U.S.A.
	Beaver DHC-2 (L-20)	de Havilland	Canada.
	Catalina PBY-5A	Convair (Consolidated-Vultee)	U.S.A.
	Sentinel L-5	Convair-Stinson	U.S.A.
	Helio Courier	Helio Aircraft Corp.	U.S.A.

PHILIPPINES

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86D	North American	U.S.A.
	Sabre F-86F	North American	U.S.A.
Transport	Skytrain C-47B (R4D)	Douglas	U.S.A.
	Friendship F-27	Fokker	Netherlands.
Helicopter	Chickasaw H-19A	Sikorsky	U.S.A.
	Sioux H-13D	Bell	U.S.A.
Trainer	Shooting Star RT-33A (F-80)	Lockheed	U.S.A.
	Mentor T-34A	Beech	U.S.A.
	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
Miscellaneous	Trojan T-28A	North American	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Albatross SA-16A	Grumman	U.S.A.
	Sentinel L-5E	Stinson	U.S.A.
	LC-180	Cessna	U.S.A.
	LC-310	Cessna	U.S.A.
	Commander L-26	Aero	U.S.A.

POLAND

Type	Designation	Manufacturer	Country
Fighter-----	Fagot MIG-15-----	Mikoyan & Gurevich-----	U.S.S.R.
	Fresco MIG-17-----	Mikoyan & Gurevich-----	U.S.S.R.
	Fresco D-MIG-17-----	Mikoyan & Gurevich-----	U.S.S.R.
	Farmer MIG-19-----	Mikoyan & Gurevich-----	U.S.S.R.
Light Bomber-----	Beagle Il-28-----	Ilyushin-----	U.S.S.R.
Transport-----	Cab Li-2-----	Lisitsin-----	U.S.S.R.
	Coach Il-12-----	Ilyushin-----	U.S.S.R.
	Crate Il-14-----	Ilyushin-----	U.S.S.R.
Helicopter-----	Hound Mi-4-----	Mil-----	U.S.S.R.
Trainer-----	Midget U-MIG-15-----	Mikoyan & Gurevich-----	U.S.S.R.

Naval Air Arm

POLAND (NAVAL AIR)

The Polish naval air arm is an integral part of the Polish Navy.

Type	Designation	Manufacturer	Country
Fighter-----	Fagot MIG-15-----	Mikoyan & Gurevich-----	U.S.S.R.
	Fresco MIG-17-----	Mikoyan & Gurevich-----	U.S.S.R.
	Fresco D-MIG-17-----	Mikoyan & Gurevich-----	U.S.S.R.
Light Bomber-----	Beagle Il-28-----	Ilyushin-----	U.S.S.R.
Helicopter-----	Hound Mi-4-----	Mil-----	U.S.S.R.

PORTUGAL

Type	Designation	Manufacturer	Country
Fighter-----	Sabre F-86F-----	North American-----	U.S.A.
	Thunderjet F-84G-----	Republic-----	U.S.A.
ASW-----	Harpoon PV-2-----	Lockheed-----	U.S.A.
	Neptune P2V-5-----	Lockheed-----	U.S.A.
Transport-----	Noratlas-----	SNCAN-----	France.
	Skymaster C-54 (R5D)-----	Douglas-----	U.S.A.
	Skytrain C-47 (R4D)-----	Douglas-----	U.S.A.
	Skymaster SC-54-----	Douglas-----	U.S.A.
	JU-52-----	Junkers-----	Germany.
Helicopter-----	H-19A-----	Sikorsky-----	U.S.A.
	Alouette II-----	Sud-Aviation-----	France.
Trainer-----	Shooting Star T-33 (F-80)-----	Lockheed-----	U.S.A.
	Vampire T-55-----	de Havilland-----	U.K.
	Texan T-6 (SNJ)-----	North American-----	U.S.A.
	Chipmunk-----	de Havilland-----	U.K.
Miscellaneous-----	Expeditor C-45 (JRB)-----	Beech-----	U.S.A.
	Albatross SA-16A-----	Grumman-----	U.S.A.
	Goose JRF-6-----	Grumman-----	U.S.A.
	Cub L-21-----	Piper-----	U.S.A.
	Widgeon J4F-2-----	Grumman-----	U.S.A.

RUMANIA

Type	Designation	Manufacturer	Country
Fighter.....	Fagot MIG-15.....	Mikoyan & Gurevich.....	U.S.S.R.
	Fresco MIG-17.....	Mikoyan & Gurevich.....	U.S.S.R.
	Farmer MIG-19.....	Mikoyan & Gurevich.....	U.S.S.R.
Light Bomber.....	Beagle Il-28.....	Ilyushin.....	U.S.S.R.
Transport.....	Cab Li-2.....	Lisitsin.....	U.S.S.R.
	Coach Il-12.....	Ilyushin.....	U.S.S.R.
Helicopter.....	Hound Mi-4.....	Mil.....	U.S.S.R.
Trainer.....	Midget U-MIG-15.....	Mikoyan & Gurevich.....	U.S.S.R.

SAUDI ARABIA

Type	Designation	Manufacturer	Country
Fighter-Bomber.....	Vampire FB-52.....	de Havilland.....	U.K.
Transport.....	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
	Skymaster C-54 (R5D).....	Douglas.....	U.S.A.
	Avitruc C-123B.....	Fairchild.....	U.S.A.
Helicopter.....	Chickasaw H-19.....	Sikorsky.....	U.S.A.
Trainer.....	Trojan T-28.....	North American.....	U.S.A.
	Buckaroo T-35.....	Temco.....	U.S.A.
	El Gomhoria Mk. 2.....	Heliopolis.....	Egypt.
Miscellaneous.....	Chipmunk T-20.....	de Havilland.....	U.K.
	Sealand.....	Short.....	U.K.

SOUTH AFRICA

Type	Designation	Manufacturer	Country
Fighter-Day.....	Sabre Mk. 6.....	Canadair.....	Canada.
Fighter-Bomber.....	Vampire F.B.-5.....	de Havilland.....	U.K.
	Vampire F.B.-52.....	de Havilland.....	U.K.
ASW.....	Shackleton M.R. 3.....	Avro.....	U.K.
Transport.....	Viscount.....	Vickers.....	U.K.
	Skytrain C-47 (R4D).....	Douglas.....	U.S.A.
	Heron C-1.....	de Havilland.....	U.K.
Helicopter.....	Chickasaw H-19.....	Sikorsky.....	U.S.A.
	Dragonfly S-51.....	Westland.....	U.K.
Trainer.....	Vampire T.11.....	de Havilland.....	U.K.
	Harvard T-6 (SNJ).....	North American.....	U.S.A.
Miscellaneous.....	DO-27.....	Dornier-Werke.....	Germany.
	Devon C-1.....	de Havilland.....	U.K.
	Ventura PV-1.....	Lockheed.....	U.S.A.

SPAIN

Type	Designation	Manufacturer	Country
Fighter-Day	Sabre F-86F	North American	U.S.A.
	ME-109	Messerschmitt	Germany.
Light Bomber	HE-111	Heinkel	Spain.
Transport	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
	JU-52	Junkers	Germany.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
Trainer	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Mentor T-34	Beech	U.S.A.
	BU-131	Casa	Spain.
	I-11B	Aisa	Spain.
	I-115	Aisa	Spain.
Miscellaneous	Albatross SA-16	Grumman	U.S.A.
	DO-24	Dornier	Germany.
	DO-27	Dornier	Germany.
	L-2	Taylorcraft	U.S.A.

SUDAN

Type	Designation	Manufacturer	Country
Transport	Pembroke Mk. 55	Percival	U.K.
Trainer	El Gomhoria	Heliopolis	Egypt.
	Provost T-53	Percival	U.K.

SWITZERLAND

Type	Designation	Manufacturer	Country
Fighter-Day	Hunter Mk. 58	Hawker	U.K.
Fighter-Bomber	Vampire FB-6	de Havilland	U.K.
		(License—Switzerland)	
	Venom FB-50	de Havilland	U.K.
		(License—Switzerland)	
	C-3603	Swiss Federal	Switzerland.
Transport	JU-52	Junkers	Germany.
Helicopter	Alouette II	Sud-Aviation	France.
	SO 1221 (Djinn)	Sud-Aviation	France.
	H-23 (Raven)	Hiller	U.S.A.
Trainer	Vampire T-55	de Havilland	U.K.
	Bunker 133	Dornier-Werke	Switzerland.
	P-2	Pilatus	Switzerland.
	P-3	Pilatus	Switzerland.
	Texan T-6 (SNJ)	North American	U.S.A.
Miscellaneous	DO-27	Dornier	Germany.
	Twin Bonansa	Beech	U.S.A.
	ME-108	Messerschmitt	Germany.
	Norecvin 1203/II	SNCAN	France
	PA-12 (Super Piper)	Piper	U.S.A.
	Messerschmitt BF-108	Messerschmitt	Germany.
	Taifun (Nord 1002)	Nord	France.

SYRIA

Type	Designation	Manufacturer	Country
Fighter	Fresco MIG-17D	Mikoyan & Gurevich	U.S.S.R.
	Fresco MIG-17C	Mikoyan & Gurevich	U.S.S.R.
Transport	Crate Il-14	Ilyushin	U.S.S.R.
	DC-3 (Skytrain) (C-47) (R4D)	Douglas	U.S.A.
Helicopter	Hound (Mi-4)	Mil	U.S.S.R.
	Hare (Mi-1)	Mil	U.S.S.R.
Trainer	Midget (U-MIG-15)	Mikoyan & Gurevich	U.S.S.R.
	Vampire T-11	de Havilland	U.K.
	Harvard T-6 (SNJ)	North American	U.S.A.
	Chipmunk T-20	de Havilland	U.K.
Miscellaneous	C-45 (D-18) Expeditor	Beech	U.S.A.
	VC-61	Fairchild	U.S.A.
	Cub	Piper	U.S.A.
	Proctor	Percival	U.K.

THAILAND

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86F	North American	U.S.A.
	Thunderjet F-84G	Republic	U.S.A.
Fighter-Bomber	Bearcat F8F	Grumman	U.S.A.
Reconnaissance	RT-33 Shooting Star (F-80)	Lockheed	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
	Raven H-23B	Hiller	U.S.A.
Trainer	T-33 Shooting Star (F-80)	Lockheed	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Chipmunk T-30	de Havilland	Canada.
	Tiger Moth	de Havilland	U.K.
Miscellaneous	Expeditor C-45 (JRB)	Beech	U.S.A.
	170-B	Cessna	U.S.A.
	L-4 Piper Cub	Piper	U.S.A.
	L-5 Sentinel	Convair-Stinson	U.S.A.
	Sea Prince C-1	Percival	U.K.

TURKEY

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86F	North American	U.S.A.
Fighter-Bomber	Super Sabre F-100D	North American	U.S.A.
	Thunderstreak F-84F	Republic	U.S.A.
	Thunderstreak F-84FQ	Republic	U.S.A.
	Thunderjet F-84G	Republic	U.S.A.
Reconnaissance	Thunderflash RF-84F	Republic	U.S.A.
Transport	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	Chickasaw H-19D	Sikorsky	U.S.A.
Trainer	Super Sabre F-100F	North American	U.S.A.
	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
	Kansas T-11 (SNB-1)	Beech	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Mentor T-34	Beech	U.S.A.

URUGUAY

Type	Designation	Manufacturer	Country
Fighter	Shooting Star F-80C (T-33)	Lockheed	U.S.A.
Light Bomber	Mitchell B-25 (PBJ)	North American	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
Helicopter	H-13G	Bell	U.S.A.
Trainer	Shooting Star T-33 (F-80)	Lockheed	U.S.A.
	Texan T-6 (SNJ)	North American	U.S.A.
	Kansas T-11 (SNB-1)	Beech	U.S.A.
	PT-19	Fairchild	U.S.A.
	Cornell PT-26	Fairchild	U.S.A.
	Chipmunk T-20	de Havilland	U.K.
Miscellaneous	C-43	Beech	U.S.A.
	C-45 (JRB) Expeditior	Beech	U.S.A.
	L-17	Ryan	U.S.A.
	Cub	Piper	U.S.A.

URUGUAY (NAVAL AIR ARM)

Type	Designation	Manufacturer	Country
Fighter	Hellcat F6F-5	Grumman	U.S.A.
ASW	Mariner PBM	Martin	U.S.A.
Helicopter	HTL-6 Bell 47	Bell	U.S.A.
Trainer	PT-14	Fairchild	U.S.A.
Miscellaneous	Texan T-6 (SNJ)	North American	U.S.A.
	Widgeon J4F-2	Grumman	U.S.A.
	PA-18	Piper	U.S.A.

VENEZUELA

Type	Designation	Manufacturer	Country
Fighter-Bomber	Sabre F-86F	North American	U.S.A.
	Venom MK-4	de Havilland	U.K.
	Vampire MK-5	de Havilland	U.K.
Lt. Bomber	Canberra B-2, B-8	English Electric	U.K.
	Mitchell B-25J (PBJ)	North American	U.S.A.
Transport	Skytrain C-47 (R4D)	Douglas	U.S.A.
	Skymaster C-54 (R5D)	Douglas	U.S.A.
	Provider C-123	Fairchild	U.S.A.
Helicopter	Chickasaw H-19	Sikorsky	U.S.A.
	H-13	Bell	U.S.A.
Trainer	Canberra T-4	English Electric	U.K.
	Vampire T-55	de Havilland	U.K.
	Texan T-6 (SNJ)	North American	U.S.A.
	Navigator T-7 (SNB-2)	Beech	U.S.A.
	Kansas T-11 (SNB-1)	Beech	U.S.A.
Miscellaneous	Mentor T-34	Beech	U.S.A.
	Seminole L-23F	Beech	U.S.A.
	L-17	Ryan	U.S.A.
	Expeditior C-45 (JRB)	Beech	U.S.A.

YUGOSLAVIA

Type	Designation	Manufacturer	Country
Fighter	Sabre F-86E	North American	U.S.A.
	Gnat FO-141	Folland	U.K.
Fighter-Bomber	Thunderjet F-84G	Republic	U.S.A.
	Thunderbolt F-47D	Republic	U.S.A.
	S-49/49C	Ikarus	Yugoslavia
Light Bomber	Mosquito NF-38/B6	de Havilland	U.K.
Reconnaissance	Shooting Star RT-33A (F-80)	Lockheed	U.S.A.
Transport	Dakota C-47 (R4D)	Douglas	U.S.A.
	DC-6	Douglas	U.S.A.
	JU-52	Junkers	Germany
Helicopter	Crate IL-14	Ilyushin	U.S.S.R.
	Whirlwind	Westland (Under license from Sikorsky)	U.K.
	H-5	Sikorsky	U.S.A.
Trainer	H-23	Hiller	U.S.A.
	Shooting Star T-33A (F-80)	Lockheed	U.S.A.
	Aero 2/3	Ikarus/UTVA	Yugoslavia
	214	Ikarus	Yugoslavia
	213	Utva	Yugoslavia
	522	Ikarus	Yugoslavia
	KB-6	Letov	Yugoslavia
Miscellaneous	Anson	Avro	U.K.
	Dove	de Havilland	U.K.
	Beaver	de Havilland	U.K.
	Sealand	Short	U.K.

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